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Aluminum statistical review for 1991

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Incorporated

Aluminum statistical review for 1991

Issued in 1992

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Contents

The Aluminum Association does not warrant the accuracy or completeness of any data in this Review. All data contained herein are subject to revision.

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Introduction 2
Capsule Review 2

Shipments

Total Industry Shipments 5
Imports of Mill Products 5
Shipments of Ingot & Mill Products 6
General Line Distributor Shipments 8
Shipments of Castings 9

Markets

Shipments by Major Market 12
Product Shipments by Major Market 13
Trends in Selected Markets 18

Supply

Introduction 21
Total Supply 22
U.S. Suppliers' Inventories 24
Production of Primary Aluminum 25
Primary Aluminum Capacity 26
Number of Plants in the U.S. 27
Geographic Distribution of Aluminum Plants 27
Aluminum Scrap Consumption and Recovery 30

U.S. Foreign Trade Statistics

Introduction 32
U.S. Imports & Exports 36
U.S. Imports by Products & Country 38
U.S. Exports by Products & Country 40

World Statistics

Introduction 43
World Primary Aluminum Production 44
Aluminum Supply & Apparent Consumption-Selected Countries 46

Glossary 62

Publications 64

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Introduction to Aluminum Statistics

Aluminum cladding that encompasses 10 acres in area and is 1,000 feet high expresses the form of Hong Kong's Bank of China, winner of the annual R.S. Memorial Award for distinguished architecture using aluminum. The building was designed by I.M. Pei & Partners, Architects of New York.

ABOUT THE REVIEW

The Aluminum Association's Statistical Review for 1991 assembles in one place the most important statistical data available on the aluminum industry. It includes information on every cycle of the aluminum production process from primary aluminum to markets for finished goods to the recovery of aluminum scrap.

The Aluminum Association, Inc., representing the United States aluminum industry, is the primary source for statistics, standards and other information on aluminum and the industry.

The Review is divided into five major sections: Shipments, markets, supply, U.S. foreign trade, and world statistics. Each section is preceded by an introduction and description summary of the tables that follow. In addition, each graph or table has a description and highlights. The Review shows detailed shipment figures for 23 separate product categories. A glossary of industry terms and appended as well.

Capsule Review

Millions of Pounds	1991	1990	% Change
Total Supply	17,681	17,334	2.0
Primary Production	9,086	8,925	1.8
Primary Capacity (year-end)	9,111	9,032	0.9
Net Shipments to Major Markets			
Building & Construction	2,320	2,664	-12.9
Transportation	2,764	3,059 r	-9.6
Consumer Durables	1,041	1,123 r	-7.3
Electrical	1,276	1,313 r	-2.8
Machinery & Equipment	940	996 r	-5.6
Containers & Packaging	4,873	4,755	2.5
Other	532	576 r	-7.6
Total Domestic Shipments	13,746	14,486 r	-5.1
Exports	2,992 e	2,551 e	17.3
Total Net Shipments	16,738	17,037 r	-1.8
Statistical Adjustment	-627	-1269 r	
Total Net Shipments	16,111	15,768 r	

r - revised
e - estimated

1991 Highlights
13,746 million pounds of aluminum were shipped to U.S. markets in 1991, down 5.1 percent from the 1990 level of 14,486 million pounds. Aluminum exports of ingot and semifabricated products increased 17.3 percent in 1991 to an estimated 2,992 million pounds.

Total aluminum shipments, including exports, declined in 1991 to a level of 16,738 million pounds, a decrease of 1.8 percent from 1990 shipments of 17,037 million pounds.

Total aluminum imports into the U.S. (including scrap) increased to 3,563 million pounds in 1991, a 4.2 percent decline from 1990 levels. Imports of aluminum ingot totaled 2,268 million pounds in 1991, a 6.9 percent increase from 1990 imports of 2,121 million pounds. Total imports of aluminum mill products in 1991 were 814 million pounds, a 19.5 percent decline from 1990 import levels of 1,012 million pounds.

The United States supply of aluminum in 1991 rose 2.0 percent to a level of 17,681 million pounds. Domestic primary production increased 1.8 percent to 9,086 million pounds, imports of aluminum ingot and mill products were down 1.6 percent to 3,082 million pounds and domestic recovery from scrap accounted for 5,514 million pounds, a 4.5 percent increase from 1990.

Containers and Packaging continue to be the industry's largest market in 1991 with a volume of 4,873 million pounds and accounting for 29.1 percent of total shipments. This market increased 2.5 percent from the 1990 level of 4,755 million pounds.

The second largest market for 1991 was **Transportation**, totaling 2,764 million pounds and accounting for 16.5 percent of the total shipments, decreasing 9.6 percent from 1990. In the **Building and Construction** market, 1991 shipments of 2,320 million pounds decreased 12.9 percent from 1990 levels.

The **Electrical** market showed a decrease of 2.8 percent from 1990 with 1991 shipments totaling 1,276 million pounds. **Consumer Durables** shipments dropped 7.3 percent to 1,041 million pounds in 1991.

Shipments to the nonelectrical **Machinery and Equipment** market decreased to 940 million pounds, a decline of 5.6 percent.

Acknowledgements
The data for this **REVIEW** were developed by the Statistical and Market Research Committee of The Aluminum Association, Inc. along with the cooperation of the following organizations: Can Manufacturers Institute; Bureau of the Census, U.S. Department of Commerce; and the Bureau of Mines, U.S. Department of the Interior

The **Aluminum Statistical Review** for 1991 was compiled and edited by Nicholas A. Adams, Director, Statistical Services.

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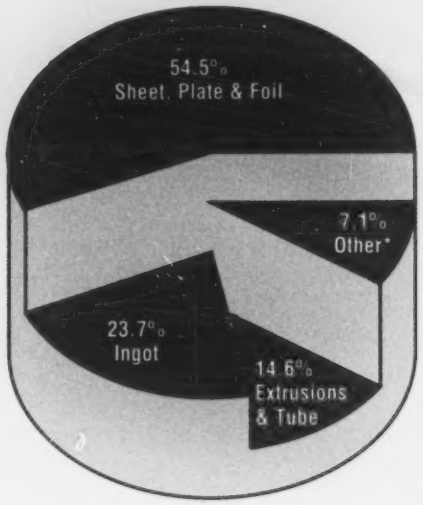
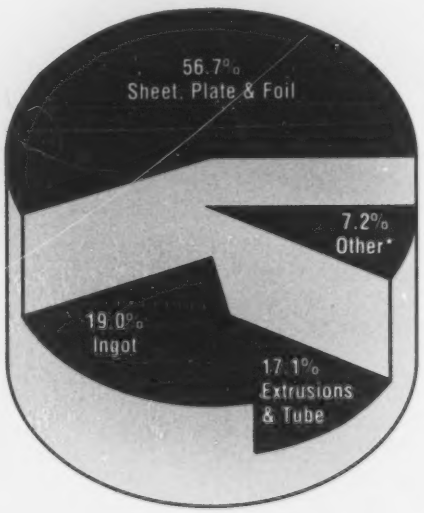
This edition covers, in most tables, the years 1981-1991. Data on the years 1960-1980 are available in a companion publication: **"Aluminum Statistical Review-Historical Supplement ."** Contact The Aluminum Association for further information.

U.S. Aluminum Industry Shipments

Percentage Distribution by Major Products: 1991



Percentage Distribution by Major Products: 1990



*Other	1991	1990
Conductor	3.7	3.7
Rod, Bar, Wire	1.9	1.8
Forgings & Impacts	0.9	1.0
Powder	0.6	0.7

U.S. INDUSTRY SHIPMENTS DOWN 1.8 PERCENT

Total net shipments in 1991, *including* imports, amounted to 16,738 million pounds from the 17,037 million pounds shipped in 1990.

Excluding imports, sheet and plate and foil volume of 8,340 million pounds were down 0.4 percent from 1990. Extruded products and tube shipments totaled 2,236 million pounds, down 11.4 percent from 1990.

The adjacent pie chart shows that the largest product category of sheet, plate and foil represented 54.5 percent of total shipments in 1991 (56.7% in 1990). Ingot for castings, destructive uses and exports accounted for 23.7 percent (19.0% in 1990) and extruded products and tube shipments were 14.6 percent (17.1% in 1990) of total shipments.

Total shipments to U.S. consumers at 13,118 million pounds were down 0.8 percent from the revised 1990 level of 13,218 million pounds. Exports increased 17.3 percent to an estimated 1991 level of 2,992 million pounds.

DESCRIPTION:

Total aluminum industry shipments presented on the next page are net shipments to U.S. consumers and for export. To avoid duplication, the figures do not include any intra-industry shipments for further fabrication into mill products. Imported ingot and mill products shipped to U.S. consumers are included.

Net shipments of ingot include domestic and import shipments and represent primary and secondary ingot shipments for export, castings and destructive uses. Net shipments of mill products are shown separate for domestic and import. Mill product imports to aluminum producers are not included in total industry shipments. These imports are further processed by the producer into another mill product which is included in the total.

Imports to consumers are included in total industry shipments. These consumers fabricate the aluminum into a finished product. Imported mill products are net of receipts by producers of mill products. Imported mill products data include reimports of metal exported for processing and returned for further processing.

The pie charts illustrate the distribution of net shipments of aluminum ingot and mill product groups during 1991 and 1990. They include net shipments of ingot and domestic mill products but exclude imported mill products, because import data are not available in the same detail as domestic shipments of mill products. The distribution is based on data shown on pages 6 and 7. The imported mill products are shown on page 5.

For information on years prior to 1981 see The Aluminum Statistical Review-Historical Supplement.

Total Industry Shipments

Millions of Pounds

Net Shipments	1991 % Total	1991 Amount	1990 % Total	1990 Amount	1990-1991 % Change	1981-1991 %Annual Growth [3]
Total	100.0	16,109	100.0	15,769 r	2.2	2.0
Ingot	22.5	3,631	17.7	2,798 r	29.8	—
Mill Products						
U.S. Producers	72.4	11,667	75.9	11,964 r	-2.5	2.2
Imports [4]	5.0	811	6.4	1,008	-19.6	8.2
U.S. Exports	18.6	2,992 e	16.2	2,551 e	17.3	9.9
U.S. Consumers [1]	81.4	13,118	83.8	13,218 r	-0.8	1.1

Total Industry Shipments 1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Net Shipments											
Total	16,109	15,769	16,406	16,423	16,380	15,340	15,272	15,521	14,154	12,505	13,814
Ingot	3,631	2,798	3,165	3,181	3,141	2,970	3,365	3,580	3,045	3,090	3,236
Mill Products											
U.S. Producers	11,667	11,964 r	12,304	12,273	12,234	11,416	11,092	11,076	10,578	9,027	10,338
Imports [4]	811	1,008	938	970	1,005	954	816	866	532	388	240
U.S. Exports	2,992 e	2,551 e	2,335 e	1,734	1,256	911	1,204	1,076	1,241	1,295	1,370
U.S. Consumers [1]	13,118	13,218	14,071	14,690	15,124	14,429	14,068	14,445	12,913	11,210	12,444

Mill Products Imports 1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Total Imports [1]											
Total	810.9	1,008.1	938.0	969.9	1,005.1	1,088.9	1,020.7	1,089.7	618.3	455.6	303.9
Sheet & Plate	682.2	865.6	760.9	732.7	765.3	836.0	770.1	884.5	536.1	414.8	247.1
Rod & Bar	19.3	35.8	46.9	98.4	117.3	128.9	128.7	82.3	27.4	10.1	34.2
Other	109.4	106.7	130.2	138.8	122.5	124.0	121.9	122.9	54.8	30.7	22.6
Imports to Consumers [1]											
Total	n/a	n/a	674.3	904.6	901.1	953.7	816.1	865.9	531.6	388.0	240.2
Sheet & Plate	n/a	n/a	528.2	727.3	732.6	798.4	680.3	746.6	477.3	357.6	205.6
Rod & Bar	n/a	n/a	19.3	44.8	54.8	51.3	24.1	1.8	9.3	1.2	12.3
Other	n/a	n/a	126.8	132.5	113.7	104.0	111.7	117.5	45.0	29.2	22.3
Imports to Producers [2]											
Total	n/a	n/a	263.7	65.3	104.0	135.2	204.6	223.8	86.7	67.6	63.7
Sheet & Plate	n/a	n/a	232.7	5.4	32.7	37.6	89.8	137.9	58.8	57.2	41.5
Rod & Bar	n/a	n/a	27.6	53.6	62.5	77.6	104.6	80.5	18.1	8.9	21.9
Other	n/a	n/a	3.4	6.3	8.8	20.0	10.2	5.4	9.8	1.5	0.3

Detail may not add due to rounding

(1) Includes reimports of metal exported for processing and returned for further processing.
(2) Product detail estimated by the Aluminum Association.
(3) Annual growth rate calculated by straight line least squares method.
(4) Figures include total imports beginning in 1987.

(e) Export figures contain estimated adjustments to account for an overstatement of U.S. export statistics published by the Bureau of the Census.

n/a Not available
(r) Revised
For information prior to 1981, see the Aluminum Statisical Review — Historical Supplement.
SOURCE: U.S. Department of Commerce, Bureau of the Census

Net Shipments of Ingot and Mill Products 1957-1991
Excludes Mill Product Imports to Consumers

Millions of Pounds

Year	Total aluminum	Total ingot	Primary ingot	Secondary ingot [3] [4]	Extrusion ingot [5]	Total mill products	Sheet and Plate: nonheat treatable	Sheet and Plate: heat treatable	Foil	Forgings Impacts[2]
1957	3,839.2	1,161.6	458.2	703.4	—	2,677.6	943.8	248.7	204.0	64.3
1958	3,571.1	974.0	368.6	605.4	—	2,597.1	944.4	209.1	199.6	50.8
1959	4,961.1	1,575.0	751.4	803.4	20.2	3,386.1	1,284.6	231.3	252.6	53.8
1960	4,657.7	1,608.6	852.3	665.2	91.1	3,049.1	1,203.4	184.8	249.0	50.1
1961	4,881.7	1,536.6	690.7	701.9	144.0	3,345.1	1,256.3	237.0	270.6	56.4

Year	Sheet: NHTS	Sheet: HTS	Plate: NHTS	Plate: HTS	Foil	Forgings	Impacts
1962	1,361.8	157.3	108.9	82.9	297.4	79.4	
1963	1,626.5	165.2	126.5	77.1	322.3	84.0	
1964	1,903.0	167.8	124.2	79.0	356.7	88.4	
1965	2,179.8	223.0	109.0	97.0	395.7	96.4	
1966	2,382.4	281.5	125.7	147.2	432.2	139.2	
1967	2,385.6	227.4	119.5	135.6	449.4	165.2	
1968	2,910.8	250.2	103.5	140.0	508.7	105.7	62.1
1969	3,299.3	200.8	105.8	120.9	559.9	97.3	59.3
1970	3,376.4	126.7	94.1	91.4	558.7	71.4	49.0
1971	3,691.1	121.6	75.6	87.8	585.6	69.5	28.7
1972	4,431.4	160.6	78.8	97.1	673.2	95.3	27.5
1973	5,308.7	203.3	109.7	119.6	774.4	114.8	27.6
1974	5,087.9	216.5	157.2	164.6	748.2	112.8	25.5
1975	3,676.8	121.0	143.2	111.2	611.8	82.8	14.4
1976	5,167.0	191.9	108.4	106.5	772.3	83.1	17.1
1977	5,505.5	300.4	104.2	130.3	805.6	105.7	15.6
1978	5,785.4	350.0	116.1	157.1	876.6	115.7	20.7
1979	5,632.4	365.4	114.9	183.5	887.0	127.4	31.4
1980	5,301.8	247.3	92.2	220.9	830.4	107.2	26.0
1981	5,504.0	200.9	106.1	167.1	850.4	109.2	29.8
1982	4,976.9	150.1	70.9	131.2	731.2	78.9	25.3
1983	5,952.4	181.0	57.5	145.4	826.4	88.6	27.6
1984	5,866.5	221.2	81.5	173.4	852.7	114.9	29.3
1985	5,964.3	220.1	74.4	183.4	812.8	108.3	40.4
1986	6,135.5	246.1	72.7	175.1	860.5	97.3	47.2
1987	6,862.5	247.7	74.1	194.3	866.3	108.3	48.0
1988	6,789.4	296.0	89.5	208.6	949.5	118.6	47.3
1989	7,046.2	256.2	75.0	234.2	887.1	118.6	40.3
1990	6,998.6	245.8	67.3	202.4	860.4	114.7	39.0
1991	6,991.3	249.4	77.7	182.4	839.4	110.7	28.4

Year	Total aluminum	Total ingot	Primary ingot	Secondary ingot [3] [4]	Extrusion ingot [5]	Total mill products
1985	14,456.3	3,364.8	3,148.9		215.9	11,091.5
1986	14,386.2	2,969.8	2,667.9		301.9	11,416.4
1987	15,374.9	3,141.0	3,221.2		(80.2)	12,233.9
1988	15,453.2	3,180.6	3,256.8		(76.2)	12,272.6
1989	15,468.4	3,164.6	3,337.6		(173.0)	12,303.8
1990	14,761.2	2,797.5	2,701.5		96.1	11,963.7
1991	15,298.5	3,631.4	3,479.5		151.9	11,667.1

Detail may not add due to rounding

(1) A small amount of rolled structural shapes is included with rod & bar in 1954-1961 and with extruded shapes in subsequent years.
(2) Through 1954 forgings and impacts were not reported. They were included in appropriate forging stock product categories, mainly rolled rod & bar.
(3) 1954-1961 Secondary ingot included extrusion ingot.
(4) Secondary ingot includes shipments by integrated companies, secondary smelters and imports.
(5) Extrusion ingot includes primpary and secondary metal shipments by integrated companies, non-integrated companies, secondary smelters and imports. Includes exports and overstated domestic shipments due to insufficient reporting of receipts.
(6) Bare wire estimated by The Aluminum Association from partial year reporting.
(7) Powder, nec included for only nine months of 1976 and excluded entirely for 1977.
(8) Welded tube included with aluminum sheet.

(r) Revised

SOURCE: U.S. Department of Commerce, Bureau of the Census

For information prior to 1955, see the Aluminum Statistical Review - Historical Supplement

Millions of Pounds

Rod & Bar	Extruded Shapes Soft alloys	Extruded Shapes Hard alloys	Drawn tube	Welded tube	Bare Wire	ACSR & bare cable	Insul. or cov. wire & cable	Powder & Paste
116.9	645.6	61.2	56.2	26.7	50.4	181.5	50.3	28.2
75.6	693.5	49.8	59.8	18.7	44.2	174.8	51.0	25.6
124.6	931.3	47.9	72.9	30.0	64.6	196.7	60.8	34.9
92.9	812.1	38.9	60.3	25.9	55.4	183.1	60.4	32.8
100.8	884.1	50.5	64.0	35.4	52.6	232.8	68.6	35.9

	Extruded rod & bar Soft	Extruded rod & bar Hard	Extruded shapes[1] Soft	Extruded shapes[1] Hard	Extruded pipe & tube Soft	Extruded pipe & tube Hard						
136.4	54.8	12.6	782.4	44.8	139.5	5.2	78.4		40.7	55.0	253.2	76.9	43.7
121.0	61.1	10.2	870.7	54.2	150.3	6.1	65.5		52.1	57.6	272.3	89.2	44.8
							Drawn tube Soft	Drawn tube Hard					
146.8	70.5	12.6	1,016.4	41.0	158.2	4.3	60.3	6.6	77.4	63.1	309.2	103.2	46.3
159.7	68.2	14.8	1,224.3	57.5	174.9	2.7	78.8	3.7	93.7	82.6	429.3	129.4	58.8
151.9	67.2	21.5	1,335.3	97.7	190.6	6.9	92.2	7.5	91.2	103.2	507.4	165.3	111.4
143.0	43.6	18.4	1,222.7	84.5	157.4	8.5	81.7	7.5	87.8	97.7	506.2	174.7	234.0
130.0	37.3	21.1	1,363.0	70.0	170.2	11.8	84.6	8.0	106.9	100.4	492.2	214.0	276.4
144.3	42.2	21.1	1,460.2	72.3	196.1		81.8	7.2	101.6	94.7	475.1	250.5	276.0
110.0	39.7	16.8	1,369.2	43.4	176.9		80.7	3.5	92.5	93.5	499.5	260.2	204.5
102.2	37.7	16.4	1,550.6	42.1	186.1		81.6	2.7	96.3	96.8	481.8	317.1	167.5
181.5	40.5	16.6	1,838.4	44.6	193.8		89.1	3.7	116.6	106.6	453.6	371.0	226.4
289.4	48.3	18.9	2,038.6	72.2	225.6		105.7	4.6	121.7	124.1	490.2	445.2	257.4
268.4	48.8	14.9	1,807.3	66.4	219.4		110.4		116.8	131.0	541.4	446.3	177.2
185.8	55.7	12.1	1,264.3	47.7	135.9		65.7		61.6	66.3	425.1	246.3	98.9
279.9	69.9		1,661.8	28.9	188.8		98.0		94.2	79.9 [6]	321.4	304.1	132.4 [7]
145.5	82.5		1,845.5	65.4	183.8		104.3		114.5	85.3 [6]	351.0	376.7	121.1 [7]
266.5	113.7		2,021.9	93.2	176.8		106.7		110.4	89.3	390.3	419.6	135.9
300.0	100.9		1,990.1	104.2	151.9		95.9		83.5	91.3	417.4	427.5	125.6
277.6	113.0		1,791.2	107.3	140.7		80.7		96.8	72.2	399.8	363.2	116.6
272.0	102.9		1,732.9	69.9	127.3		74.6		114.2	68.3	378.7	321.6	107.7
190.4	74.5	19.4	1,568.1	48.2	89.5	11.4	60.9		47.9	50.8	345.2	276.0	80.0
187.1	89.2	25.4	1,859.5	55.2	122.2	14.3	65.2		56.4	54.9	357.4	333.3	78.7
201.2	91.8	31.0	2,138.8	88.0	154.1	22.6	56.4		59.9	54.3	346.0	393.8	98.7

Rewing Stock	Rod & bar rolled or extruded Soft	Rod & bar rolled or extruded Hard			Pipe & tube extruded or drawn Soft	Pipe & tube extruded or drawn Hard						
27.2	81.3	110.0	2,285.7	67.5	238.6	10.6	[8]	86.2	277.0	396.2	107.3	
8.9	99.2	115.7	2,387.5	72.0	269.3		[8]	104.8	233.8	396.1	96.2	
24.6	109.2	113.5	2,411.9	70.2	272.8		[8]	110.7	219.9	407.7	92.1	
(33.0)	104.6	117.9	2,340.3	82.8	283.4	17.7	[8]	111.5	276.4	381.7	90.3	
(76.8)	75.5	108.0	2,285.7	79.4	260.6	25.7	[8]	111.8	297.0	387.2	92.0	
38.8	50.6	95.9	2,166.2 r	64.7	272.8	18.7	[8]	85.6	226.7	317.4	98.1	
28.2	111.5	80.2	1,779.8	164.0	265.7	26.0	[8]	72.8	256.2	306.9	96.4	

General Line Distributor Shipments

DISTRIBUTOR SHARE
36.1 PERCENT

During 1991 distributors captured 36.1 percent of their available market. Total U.S. shipments of mill products, excluding direct mill uses, was 4,032 million pounds, down 11.1 percent from 1990. Distributor shipments at an estimated 1,455 million pounds were down 6.4 percent from a year ago.

DESCRIPTION:

The table shows distributor shipments for the years 1981-1991. Also shown are estimates of the total market in which general line distributors are participants. This is labeled total U.S. Shipments, excluding Direct Mill Uses.

For information on years prior to 1981, see the Aluminum Statistical Review-Historical Supplement.

Direct mill uses are excluded because these end product manufacturers do not buy from distributors. In some cases producers make final products. These uses include residential siding, extruded shapes for all building products, furniture tube, conduit, irrigation pipe, can stock and exports. Total U.S. shipments excluding direct mill uses thus differ from total aluminum industry shipments of mill products by the amount of direct mill uses and products not generally handled by metal service centers (foil, electrical conductor, forgings and powder).

Distributors Shipments
1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Distributor Shipments											
Total	1,455	1,554	1,586	1,643	1,597	1,465	1,389	1,411	1,285	948	1,200
Sheet	936	1,010	1,014	1,083	1,068	959	907	941	864	601	783
Plate	157	169	186	178	160	155	152	146	119	104	120
Rod, Bar & Wire	151	158	163	154	157	152	138	134	131	106	140
Extruded Shapes	144	151	156	159	151	144	138	132	121	94	107
Pipe & Tube	67	66	67	69	61	55	54	58	50	43	50
Total U.S. Shipments excluding Direct Mill Uses											
Total	4,032	4,535	4,614	4,881	5,038	4,525	4,297	4,475	3,990	3,098	3,745
Sheet	2,415	2,752	2,815	2,945	3,055	2,724	2,594	2,758	2,651	1,955	2,399
Plate	250	289	319	286	272	270	273	256	190	189	240
Rod, Bar & Wire	269	271	257	382	454	366	318	384	329	275	331
Extruded Shapes	873	998	1,000	1,025	1,038	946	914	890	675	563	632
Pipe & Tube	225	225	223	243	219	219	198	187	145	116	143
Distributor Share (percent)											
Total	36.1	34.3	34.4	33.7	31.7	32.4	32.3	31.5	32.2	30.6	32.0
Sheet	38.8	36.7	36.0	36.8	35.0	35.2	35.0	34.1	32.6	30.7	32.6
Plate	62.8	58.5	58.3	62.2	58.8	57.4	55.7	57.0	62.6	55.0	50.0
Rod, Bar & Wire	56.1	58.3	63.4	40.3	34.6	41.5	43.4	34.9	39.8	38.5	42.3
Extruded Shapes	16.5	15.1	15.6	15.5	14.5	15.2	15.1	14.8	17.9	16.7	16.9
Pipe & Tube	29.8	29.3	30.0	28.4	27.9	25.1	27.3	31.0	34.5	37.1	35.0

NOTE: In this table, rod, bar and wire includes rod and bar; pipe and tube includes extruded, drawn and welded pipe and tube.

SOURCE: Estimated by the Statistical and Market Research Committee

Shipments of Castings

SHIPMENTS DOWN 0.9 PERCENT
There were an estimated 2,114 million pounds of aluminum castings shipped during 1991, a decrease of 0.9 percent from the previous year's revised total of 2,134 million pounds.

This table show shipments of aluminum castings separately for sand, permanent mold and die castings, both for sale and own use through the year 1983. Permanent mold shipments for sale and own use were combined in 1984. Own use shipments are for captive consumption in the producers' end products.

Ingot requirements for the castings shipments shown in this table are part of the net ingot shipments shown on pages 5 & 6.

Shipments of Castings
1963-1991

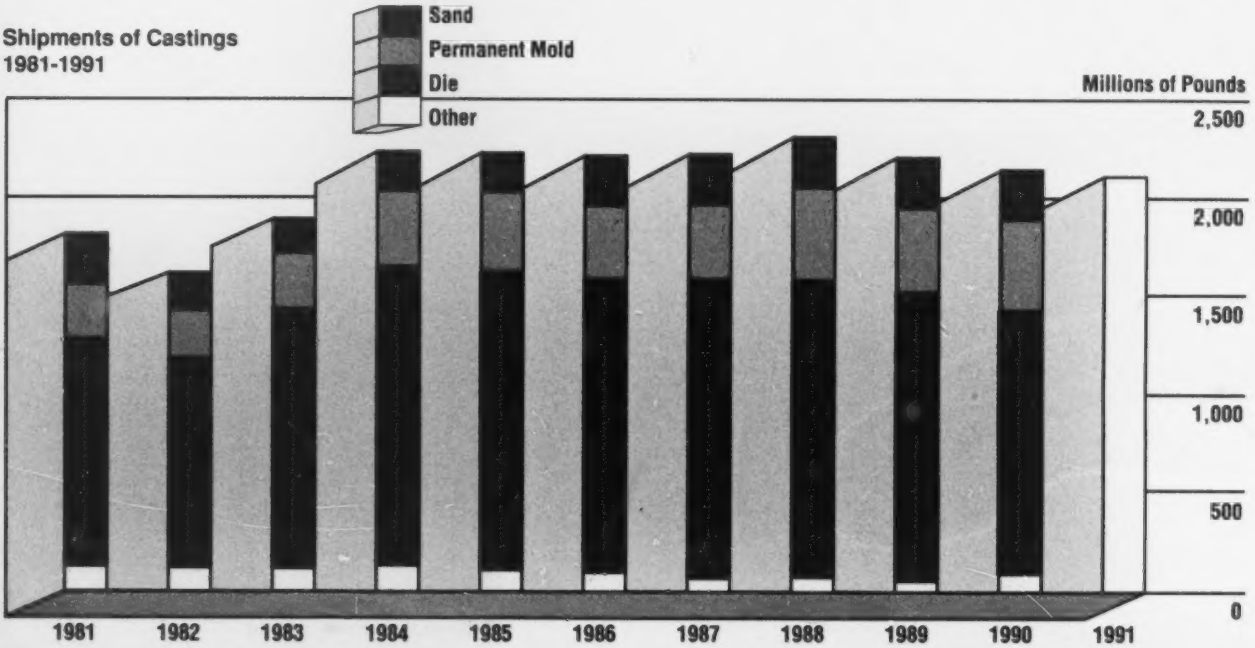
Millions of Pounds

Year*	Total Castings	Sand Castings for sale	Sand Castings own use	Permanent & Semi-permanent Mold Castings for sale	Permanent & Semi-permanent Mold Castings own use	DieCastings for sale	DieCastings own use	Other
1963	1,209.3	160.1	42.1	169.6	159.3	281.2	390.4	6.6
1964	1,257.2	168.9	60.6	179.3	137.4	312.6	386.3	12.1
1965	1,416.7	193.6	72.7	185.2	134.8	391.3	431.7	7.4
1966	1,654.1	220.6	68.0	233.3	156.1	478.7	477.9	19.5
1967	1,488.7	155.3	74.1	203.6	126.8	472.2	434.7	22.0
1968	1,615.2	148.9	58.7	201.5	158.7	510.5	518.3	18.6
1969	1,731.0	155.8	59.5	245.5	160.0	510.9	573.7	25.6
1970	1,541.9	127.0	65.5	188.7	132.3	472.3	530.7	25.4
1971	1,616.8	122.7	62.4	200.2	118.3	500.5	595.4	17.3
1972	1,915.6	158.8	62.4	236.6	143.8	595.8	685.8	32.4
1973	2,113.2	184.1	65.9	247.6	147.8	680.0	735.4	52.4
1974	1,855.4	200.4	58.1	220.1	114.6	617.3	585.5	59.4
1975	1,455.2	146.5	42.9	159.7	90.7	461.4	496.1	57.9
1976	1,971.1	170.3	41.3	203.4	121.8	606.5	721.7	106.1
1977	2,153.4	186.6	33.3	228.0	145.2	682.6	763.0	114.7
1978	2,286.8	210.9	34.9	238.5	148.6	799.8	718.1	136.0
1979	2,302.8	245.5	33.2	265.4	142.2	853.1	663.6	99.8
1980	1,689.8	200.0	33.1	217.2	105.9	633.8	429.2	70.6
1981	1,819.8	207.3	30.8	209.2	82.3	704.1	452.7	133.4
1982	1,605.3	159.0	19.2	161.9	77.2	624.2	434.0	129.8
1983	1,898.1	156.3	10.2	211.8	90.5	812.9	493.3	123.1
1984	2,232.8	183.3	12.6	388.7	(1)	932.9	583.0	132.3
1985	2,229.8	188.7	15.3	390.7	(1)	923.5	596.8	114.8
1986	2,204.8	197.6	25.8	390.7	(1)	886.3	601.9	102.5
1987	2,220.2	227.3	24.0	385.2	(1)	892.5	614.8	76.4
1988	2,316.2	225.9	28.3	474.8	(1)	919.7	587.8	79.7
1989r	2,193.9	217.6	29.4	452.3	(1)	890.3	546.2	58.1
1990r	2,134.0	204.5	24.5	459.7	(1)	848.5	519.8	77.1
1991e	2,114.0	n/a	n/a	n/a	(1)	n/a	n/a	n/a

r - revised e - estimated
na - not available at time of publication
(1) Combined with shipments for sale

Source: U.S. Department of Commerce, Bureau of the Census
(*) Prior to 1963, see the Aluminum Statistical Review - Historical Supplement.

Shipments of Castings
1981-1991



Market Shipment Highlights—1991

SHIPMENTS DOWN 1.8 PERCENT
Total industry shipments of aluminum in 1991 decreased to level of 16,738 million pounds, down 1.8 percent from the volume of 17,037 million pounds in 1990. Total domestic shipments decreased 5.1 percent and exports rose 17.3 percent.

Containers and Packaging continue as the industry's largest market in 1991 with a volume of 4,873 million pounds, or 29.1 percent of total shipments. Shipments of sheet for metal cans rose 3.5 percent to a total of 4,167 million pounds. Semirigid food containers, household and institutional foil, caps & closures, collapsible tubes and many flexible packaging uses are other important components in this market.

Building and Construction, at 2,320 million pounds, decreased 12.9 percent from a 1990 volume of 2,664 million pounds. Included in this market are residential, industrial, commercial, farm and highway applications as well as mobile homes.

Shipments to the **Transportation** market decreased to a volume of 2,764 million pounds, 9.6 percent less than 1990. Included in this market are passenger cars, trucks and buses, trailers and semitrailers and recreational vehicles.

Electrical market applications showed a 2.8 percent decrease to 1,276 million pounds in 1991. Although there was an overall general decline in this market, wire and cable products increased 10.0 percent.

Shipments to the **Consumer Durable** goods market experienced a 7.3 percent decrease to a volume of 1,041 million pounds. Uses such as large appliances and air conditioning showed decreases.

Shipments to the nonelectrical **Machinery and Equipment** market of 940 million pounds decreased 5.6 percent over 1990 levels and accounted for 5.6 percent of the total. Uses include agricultural, contruction and industrial machinery, irrigation pipe, ladders, fasteners and other general industrial equipment.

Exports of aluminum continued to gain in 1991, increasing 17.3 percent to an estimated 2,992 million pounds or 17.9 percent of total shipments.

The **average annual growth rate*** for aluminum shipments in the 1981-1991 period was 2.9 percent.

(*) Annual rate calculated by straight line least square method.

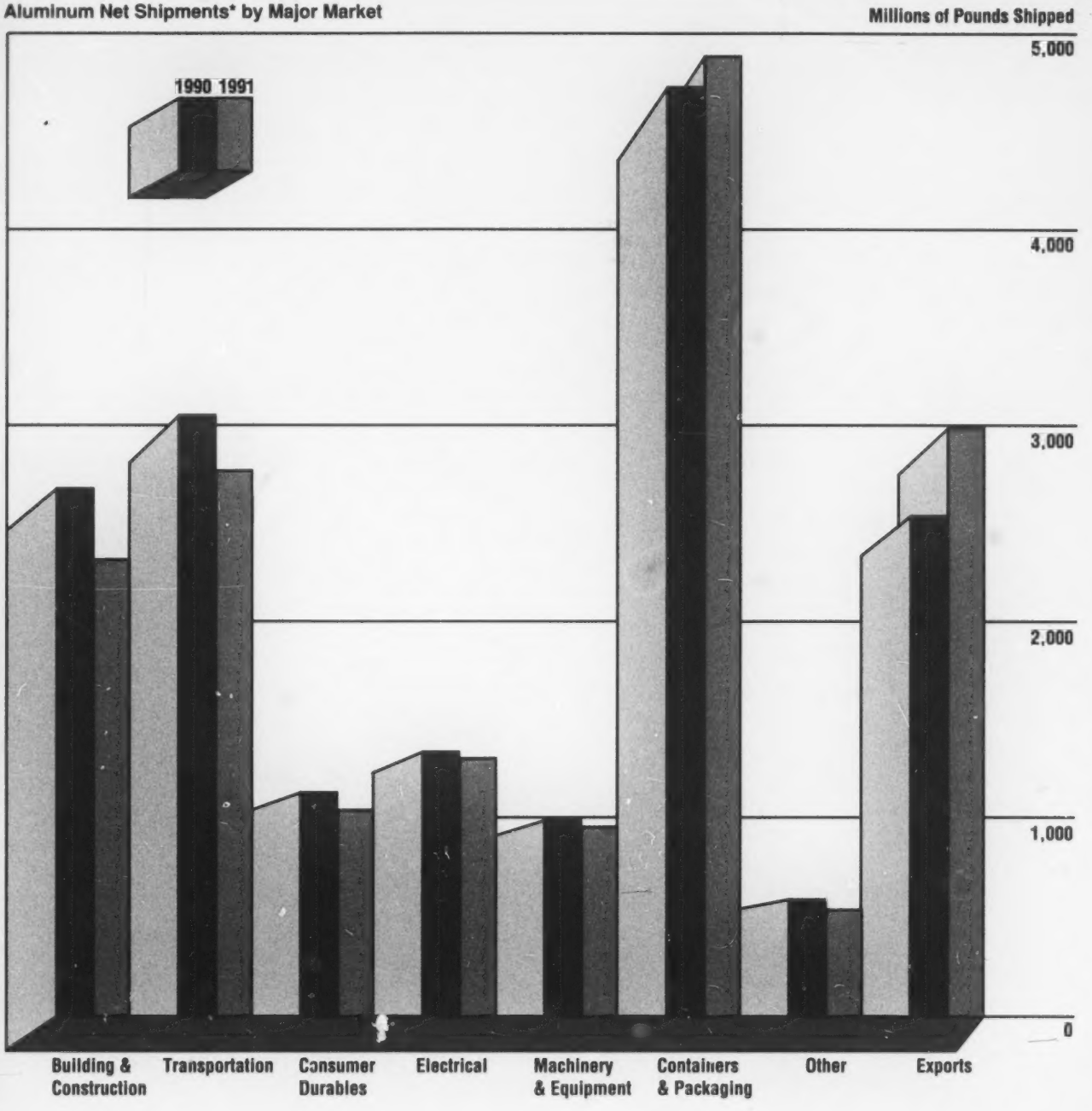
DESCRIPTION:

The Statistical and Market Research Committee of The Aluminum Association, Inc. has developed an annual breakdown of total aluminum industry shipments by major market since 1960. End use data on U.S. aluminum shipments are not available from government sources on a regular basis. Aluminum consumption figures for some industries are published by the U.S. Department of Commerce in the Census of Manufacturers. The most recent such Census covers the year 1987.

In the United States the aluminum industry has identified its major markets as building and construction, transportation, consumer durables, electrical, machinery and equipment, containers and packaging, exports and other end uses. Each of these major markets has a wide range of end uses within it.

Tables on pages 13-17 show considerable detail on the major markets for 1981-1991. Pages 18-20 also depict trends for 1981-1991 in selected important aluminum uses.

For information on years prior to 1981 see the Aluminum Statistical Review-Historical Supplement.


Aluminum Net Shipments* by Major Market
Millions of Pounds Shipped
1990 1991
5,000
4,000
3,000
2,000
1,000
0
Building & Construction
Transportation
Consumer Durables
Electrical
Machinery & Equipment
Containers & Packaging
Other
Exports

Shipments by Major Market

Millions of Pounds

Major Market	1991 % Dist.	1991 Amount	1990 % Dist.	1990 Amount	1990-1991 % Change	1981-1991 % Annual Growth
Building & Construction	13.9	2,320	15.6	2,664	-12.9	0.2
Transportation	16.5	2,764	18.0	3,059 r	-9.6	3.5
Consumer Durables	6.2	1,041	6.6	1,123 r	-7.3	2.0
Electrical	7.6	1,276	7.7	1,313 r	-2.8	0.8
Machinery & Equipment	5.6	940	5.8	996 r	-5.6	2.4
Containers & Packaging	29.1	4,873	27.9	4,755	2.5	3.2
Other	3.2	532	3.4	576 r	-7.6	-0.6
Domestic, total	82.1	13,746	85.0	14,486	-5.1	2.1
Exports	17.9	2,992 e	15.0	2,551 e	17.3	9.9
Total Shipments	100.0	16,738	100.0	17,037	-1.8	2.9
Statistical Adjustment **		-627		-1269 r	—	—
Adjusted Net Shipments *		16,111		15,768	—	—

r - revised

* *Total mill products are net shipments of aluminum mill products as reported by domestic producers to the U.S. Department of Commerce, plus imported mill products. Prior to 1987, import receipts to domestic producers were substracted.*

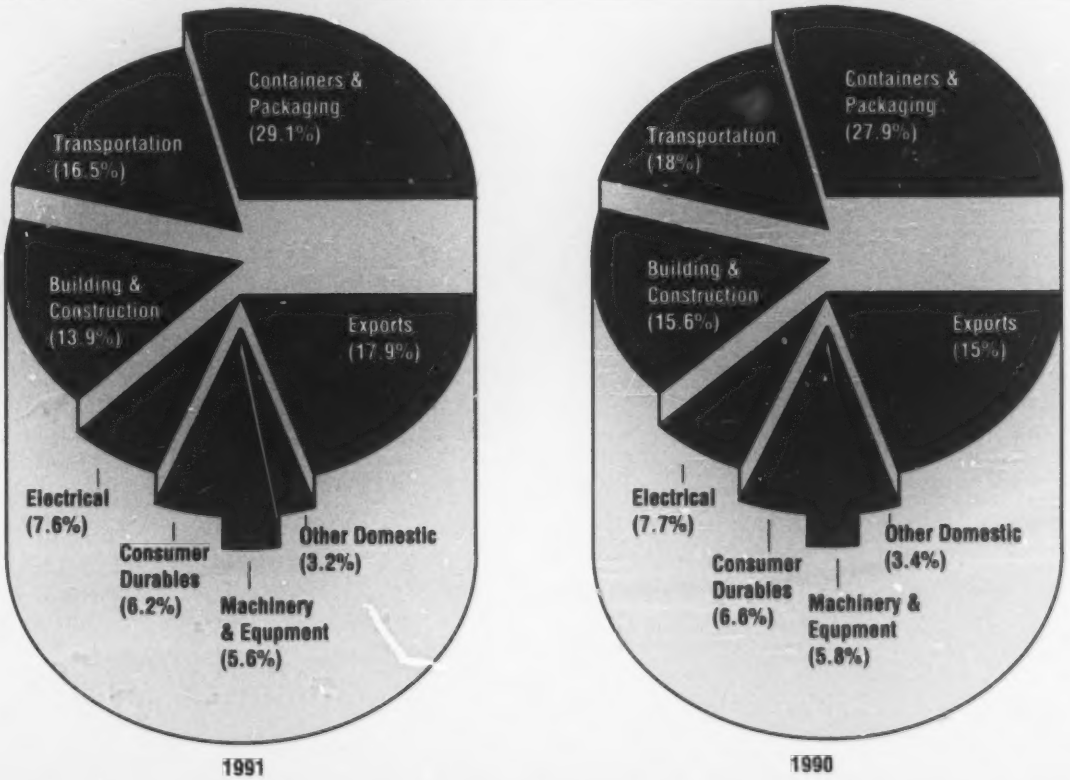
** *Statistical Adjustment accounts for net shipments of aluminum reported by the Bureau of the Census which the Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting.it also includes otherwise unpublished revisions to Census data.The addition of the adjustment reconciles the amounts reported by the Bureau of the Census with net shipments that the Association feels are more correct.*

e - Export figures contain estimated adjustments to account for either an overstatement (or understatement) of U.S. export statistics published by the Bureau of the Census.

NOTE: Net Shipments exclude intra-industry shipments for further fabrication.It is the most accuarate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further further processing are eliminated.

SOURCE: Estimated by the Statistical & Market Research Committee of the Aluminum Association, Inc. based on association surveys and published government reports.

Distribution of Aluminum Net Shipments* by Major Market



Product Net Shipments* by Major Market
1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Total Aluminum											
Building & Construction	2,320	2,664	2,853	2,901	3,180	3,157	3,032	2,866	2,870	2,257	2,553
Transportation	2,764	3,059 r	3,192	3,386	3,294	3,025	3,049	3,083	2,427	1,836	2,204
Consumer Durables	1,041	1,123 r	1,200	1,296	1,271	1,190	1,066	1,106	1,054	822	1,000
Electrical	1,276	1,313	1,462	1,479	1,371	1,359	1,394	1,478	1,268	1,107	1,324
Machinery & Equipment	940	996 r	962	959	883	845	832	832	779	704	881
Containers & Packaging	4,873	4,755	4,656	4,489	4,524	4,247	4,105	4,031	3,918	3,568	3,512
Other	532	576 r	581	593	616	515	583	614	576	526	645
Domestic, total	13,746	14,486 r	14,906	15,103	15,139	14,338	14,061	14,010	12,892	10,820	12,119
Exports	2,992 e	2,551 e	2,336	1,734	1,255	911	1,204	1,076	1,241	1,295	1,370
Aluminum Total	16,738	17,037 r	17,242	16,837	16,394	15,249	15,265	15,086	14,133	12,115	13,489
Statistical adjustment **	-627	-1269 r	-835	-413	-13	101	16	439	20	391	325
Adjusted aluminum total *	16,111	15,768 r	16,407	16,424	16,381	15,350	15,281	15,525	14,153	12,506	13,814
Ingot (1)											
Building & Construction	68	74	81	80	92	107	105	102	91	86	90
Transportation	1,259	1,363 r	1,404	1,531	1,461	1,348	1,415	1,420	1,172	888	1,017
Consumer Durables	257	271 r	277	288	287	306	301	301	275	259	291
Electrical	165	180	182	198	187	197	196	196	170	165	190
Machinery & Equipment	323	337 r	326	311	292	299	295	290	256	249	293
Containers & Packaging	5	5	5	5	5	7	12	18	20	15	22
Other	215	240 r	249	253	237	194	255	258	248	227	313
Domestic, total	2,292	2,470 r	2,524	2,666	2,561	2,458	2,579	2,585	2,232	1,889	2,216
Exports	1,761	1,520 r	1,342	912	628	472	786	594	813	817	706
Ingot Total	4,053	3,990 r	3,866	3,578	3,189	2,930	3,365	3,179	3,045	2,706	2,922
Statistical adjustment **	-422	-1193 r	-701	-397	-48	40	—	400	—	384	314
Adjusted ingot total *	3,631	2,797 r	3,165	3,181	3,141	2,970	3,365	3,579	3,045	3,090	3,236
Mill Products											
Building & Construction	2,252	2,590	2,772	2,821	3,088	3,050	2,927	2,764	2,779	2,171	2,463
Transportation	1,505	1,696	1,788	1,855	1,833	1,677	1,634	1,663	1,255	948	1,187
Consumer Durables	784	852	923	1,008	984	884	765	805	779	563	709
Electrical	1,111	1,133	1,280	1,281	1,184	1,162	1,198	1,282	1,098	942	1,134
Machinery & Equipment	617	659	636	648	591	546	537	542	523	455	588
Containers & Packaging	4,868	4,750	4,651	4,484	4,519	4,240	4,093	4,013	3,898	3,553	3,490
Other	317	336	332	340	379	321	328	356	328	299	332
Domestic, total	11,454	12,016	12,382	12,437	12,578	11,880	11,482	11,425	10,660	8,931	9,903
Exports	1,231 e	1,031 e	994	822	627	439	418	482	428	478	664
Mill Products Total	12,685	13,047	13,376	13,259	13,205	12,319	11,900	11,907	11,088	9,409	10,567
Statistical adjustment **	-205	-76	-134	-16	35	61	16	39	20	7	11
Adjusted mill products total	12,480	12,971	13,242	13,243	13,240	12,380	11,916	11,946	11,108	9,416	10,578

NOTE: See page 17 for footnotes.

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market 1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Sheet											
Building & Construction	1,123	1,268	1,293	1,293	1,501	1,401	1,350	1,295	1,424	1,022	1,190
Transportation	622	712	738	811	792	712	676	720	567	386	499
Consumer Durables	392	440	468	531	532	476	418	411	437	295	380
Electrical	241	283	287	291	266	243	243	264	218	186	242
Machinery & Equipment	318	348	331	336	318	290	288	285	285	229	282
Containers & Packaging	4,260	4,125	4,039	3,831	3,868	3,626	3,509	3,395	3,275	2,977	2,869
Other	86	90	88	80	112	73	66	80	82	65	74
Domestic, total	7,042	7,266	7,244	7,173	7,389	6,821	6,550	6,450	6,288	5,160	5,536
Exports	930 e	807 e	785	644	469	337	303	373	296	296	368
Sheet Total	7,972	8,073	8,029	7,817	7,858	7,158	6,853	6,823	6,584	5,456	5,904
Statistical adjustment **	-89	-27	-20	-27	-20	-23	-24	-10	15	15	-4
Adjusted sheet total *	7,883	8,046	8,009	7,790	7,838	7,135	6,829	6,813	6,599	5,471	5,900
Plate											
Building & Construction	1	1	1	1	1	1	1	1	1	1	1
Transportation	211	239	269	236	224	227	238	224	155	151	179
Consumer Durables	1	1	1	1	1	1	1	1	1	1	1
Electrical	4	4	4	4	4	5	4	4	4	4	18
Machinery & Equipment	24	24	24	23	22	19	18	21	16	18	29
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	18	22	20	21	20	17	16	13	13	14	12
Domestic, total	259	291	319	286	272	270	278	264	190	189	240
Exports	51 e	45 e	44	41	34	23	26	30	23	27	43
Plate Total	310	336	363	327	306	293	304	294	213	216	283
Statistical adjustment **	-9	-2	—	—	—	—	-5	-8	—	—	—
Adjusted plate total *	301	334	363	327	306	293	299	286	213	216	283
Foil											
Building & Construction	35	36	39	45	57	48	46	38	38	26	35
Transportation	55	61	64	63	61	52	52	49	45	29	32
Consumer Durables	132	135	168	167	157	131	115	134	106	77	112
Electrical	11	10	9	9	9	11	13	20	22	19	25
Machinery & Equipment	15	14	13	15	15	14	15	17	16	14	17
Containers & Packaging	606	623	608	650	648	611	580	613	613	570	614
Other	6	7	8	12	14	9	7	7	5	3	8
Domestic, total	860	886	909	961	961	876	828	878	845	738	843
Exports	53 e	33 e	30	34	32	13	12	12	11	13	21
Foil Total	913	919	939	995	993	889	840	890	856	751	864
Statistical adjustment **	-20	9	2	27	-62	23	25	7	—	—	—
Adjusted foil total *	893	928	941	1,022	931	912	865	897	856	751	864
Extruded Shapes											
Building & Construction	1,020	1,203	1,345	1,392	1,435	1,506	1,432	1,334	1,233	1,045	1,163
Transportation	405	456	484	513	540	488	470	479	345	270	325
Consumer Durables	169	184	185	193	191	183	151	134	103	79	88
Electrical	110	125	120	125	119	114	119	110	74	71	76
Machinery & Equipment	130	142	136	129	116	106	106	90	75	71	80
Containers & Packaging	—	—	—	—	—	—	—	1	3	—	—
Other	59	63	65	65	72	55	68	76	75	72	63
Domestic, total	1,893	2,173	2,335	2,417	2,473	2,452	2,346	2,224	1,908	1,608	1,795
Exports	56 e	38 e	33	26	28	16	16	11	10	9	9
Extruded Shapes Total	1,949	2,211	2,368	2,443	2,501	2,468	2,362	2,235	1,918	1,617	1,804
Statistical adjustment **	—	28	10	—	—	10	8	4	—	1	—
Adj. extruded shapes total *	1,949	2,239	2,378	2,443	2,501	2,478	2,370	2,239	1,918	1,618	1,804

NOTE: See page 17 for footnotes.

Product Net Shipments* by Major Market
1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Extruded Pipe & Tube											
Building & Construction	32	34	32	32	32	35	37	33	25	31	23
Transportation	52	57	61	61	54	45	49	35	26	16	20
Consumer Durables	66	65	74	86	75	68	56	44	31	25	22
Electrical	85	97	97	95	86	98	89	67	59	49	51
Machinery & Equipment	56	47	41	42	33	38	29	15	14	16	21
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	16	13	8	7	8	11	8	7	6	3	4
Domestic, total	307	313	313	323	288	295	268	201	161	140	141
Exports	23	22	17	17	15	10	10	9	9	12	14
Extruded Pipe & Tube Total	330	335	330	340	303	305	278	210	170	152	155
Statistical adjustment **	-33	-38	-40	-30	-20	-22	-22	-24	-30	-50	-27
Adj. ext. pipe & tube total	297	297	290	310	283	283	256	186	140	102	128
Drawn Tube											
Building & Construction								3	3	2	3
Transportation								9	6	5	8
Consumer Durables								17	22	21	28
Electrical								8	9	9	9
Machinery & Equipment								14	17	17	19
Containers & Packaging								—	—	—	—
Other								4	7	6	7
Domestic, total								55	64	60	74
Exports								1	1	1	1
Drawn Tube Total								56	65	61	75
Statistical adjustment **											
Adjusted drawn tube total *	(3)	(3)	(3)	(3)	(3)	(3)	(3)	56	65	61	75
Welded Tube											
Building & Construction								1	1	1	2
Transportation								—	—	—	1
Consumer Durables								38	52	45	54
Electrical								2	3	3	4
Machinery & Equipment								15	14	13	46
Containers & Packaging								—	—	—	—
Other								1	1	1	3
Domestic, total								57	71	63	110
Exports											
Welded Tube Total								57	71	63	110
Statistical adjustment **								3	–5	–15	4
Adjusted welded tube total *	(4)	(4)	(4)	(4)	(4)	(4)	(4)	60	56	48	114
Rod & Bar (2)											
Building & Construction	10	11	11	11	14	13	22	27	25	23	25
Transportation	46	47	45	46	45	46	41	45	40	29	31
Consumer Durables	15	17	15	16	15	14	13	15	17	11	13
Electrical	67	75	75	85	77	70	71	85	72	66	92
Machinery & Equipment	49	56	58	66	53	51	52	53	54	46	52
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	27	32	30	36	31	30	21	29	21	24	20
Domestic, total	214	238	234	260	235	224	220	254	229	199	233
Exports	26	28	40	24	23	21	23	22	24	52	103
Rod & Bar Total	240	266	274	284	258	245	243	276	253	251	336
Statistical adjustment **	-1	-45	-120	4	107	30	—	55	49	34	51
Adjusted rod & bar total *	239	221	154	288	365	275	243	331	302	285	387

NOTE: See page 17 for footnotes.

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market 1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Bare Wire											
Building & Construction	31	37	51	47	48	46	39	31	28	19	20
Transportation	11	12	15	15	13	12	12	9	4	4	4
Consumer Durables	6	6	8	8	8	6	6	5	5	4	5
Electrical	6	8	10	9	9	7	7	9	8	8	9
Machinery & Equipment	11	13	17	20	16	12	14	15	16	16	22
Containers & Packaging	2	2	4	3	3	3	4	4	7	6	7
Other	2	3	4	6	5	5	4	2	2	3	3
Domestic, total	69	81	109	108	102	91	86	75	70	60	70
Exports	45 e	23	16	11	10	7	9	6	10	12	25
Bare Wire Total	114	104	125	119	112	98	95	81	80	72	95
Statistical adjustment **	-13	-3	34	10	10	21	12	0	-19	-18	-23
Adjusted bare wire total *	101	101	159	129	122	119	107	81	61	54	72
ACSR & Bare Cable											
Building & Construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer Durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	216	216 r	293	280	224	238	277	341	324	299	311
Machinery & Equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	216	216 r	293	280	224	238	277	341	324	299	311
Exports	22	12 e	6	4	2	1	5	5	35	46	68
ACSR & Bare Cable Total	238	228 r	299	284	226	239	282	346	359	345	379
Statistical adjustment **	29	—	—	—	—	—	—	—	—	—	—
Adj. ACSR & bare cable total*	267	228 r	299	284	226	239	282	346	359	345	379
Insulated or Covered Wire & Cable											
Building & Construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer Durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	370	314	384	381	388	374	373	369	302	225	293
Machinery & Equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	370	314	384	381	388	374	373	369	302	225	293
Exports	3	3	3	1	—	—	1	1	1	1	2
Insulated Wire & Cable Total	373	317	387	382	388	374	374	370	303	226	295
Statistical adjustment **	-66	—	—	—	20	22	22	24	30	50	27
Adj. insul. wire & cable total*	307	317	387	382	408	396	396	394	333	276	322
Forgings											
Building & Construction	—	—	—	—	—	—	—	1	1	1	1
Transportation	97	105	105	103	97	87	89	87	62	53	82
Consumer Durables	1	1	1	1	1	1	1	1	1	1	2
Electrical	—	—	—	—	—	—	—	1	1	1	1
Machinery & Equipment	10	10	11	10	10	9	9	9	8	8	10
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	9	9	12	17	13	15	17	12	13	12	10
Domestic, total	117	125	129	131	121	112	116	111	86	76	106
Exports	9	7	10	8	7	5	7	4	3	3	3
Forgings Total	126	132	139	139	128	117	123	115	89	79	109
Statistical adjustment **	-14	-17	-20	-20	-20	-20	-15	—	—	—	—
Adjusted forgings total *	112	115	119	119	108	97	108	115	89	79	109

NOTE: See page 17 for footnotes.

Product Net Shipments* by Major Market
1981-1991

Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Impacts											
Building & Construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	6	7	7	7	7	8	7	6	5	5	6
Consumer Durables	2	3	3	5	4	4	4	5	4	4	4
Electrical	1	1	1	2	2	2	2	2	2	2	3
Machinery & Equipment	4	5	5	7	8	7	6	8	8	7	10
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	3	4	4	6	7	6	6	8	9	7	7
Domestic, total	16	20	20	27	28	27	25	29	28	25	30
Exports	—	—	—	—	—	—	—	—	—	—	—
Impacts Total	16	20	20	27	28	27	25	29	28	25	30
Statistical adjustment **	12	19	20	20	20	20	15	—	—	—	—
Adjusted impacts total *	28	39	40	47	48	47	40	29	28	25	30
Powder & Paste											
Building & Construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer Durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	—	—	—	—	—	—	—	—	—	—	—
Machinery & Equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & Packaging	—	—	—	—	—	—	—	—	—	—	—
Other	91	93	93	90	97	100	115	117	94	89	121
Domestic, total	91	93	93	90	97	100	115	117	94	89	121
Exports	13	13	10	12	7	6	6	8	5	6	7
Powder & Paste Total	104	106	103	102	104	106	121	125	99	95	128
Statistical adjustment **	-1	—	—	—	—	—	—	-12	-10	-10	-17
Adj. powder & paste total *	103	106	103	102	104	106	121	113	89	85	111

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* *Total mill products are net shipments of aluminum mill products as reported by domestic producers to the U.S. Department of Commerce, plus imported mill products. Prior to 1987, import receipts to domestic producers were substracted.*

** *Statistical Adjustment accounts for net shipments of aluminum reported by the Bureau of the Census which the Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting.It also includes otherwise unpublished revisions to Census data.The addition of the adjustment reconciles the amounts reported by the Bureau of the Census with net shipments that the Association feels are more correct.*

e - Export figures contain estimated adjustments to account for either an overstatement (or understatement) of U.S. export statistics published by the Bureau of the Census.

(1) Includes primary and secondary ingot for castings, destructive uses and exports.
(2) Extruded rod and bar combined with rolled and continuous cast rod and bar.
(3) Drawn tube combined with extruded pipe and tube.
(4) Welded tube combined with sheet.

NOTE: Net Shipments exclude intra-industry shipments for further fabrication.It is the most accuarate measure of industry output to markets because it eliminates duplication.Reported receipts of aluminum for further further processing are eliminated.

For information prior to 1981, see the Aluminum Statistical Review - Historical Supplement

SOURCE: Estimated by the Statistical & Market Research Committee of The Aluminum Association, Inc.

Trends in Selected Markets

Trends in Selected Markets*
1981-1991

BUILDING & CONSTRUCTION — Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Windows, doors & screens, total	719	885	975	1,033	1,102	1,136	1,080	987	949	748	845
Ingot	22	26	28	31	34	40	37	37	33	30	34
Total mill products	697	859	947	1,002	1,068	1,096	1,043	950	916	718	811
Sheet	130	162	161	159	181	168	168	152	154	108	131
Plate	1	1	1	1	1	1	1	1	1	1	1
Extruded shapes	555	680	760	817	860	902	845	766	733	585	651
Rod & bar [1]	—	—	—	—	—	—	9	15	14	11	14
Bare wire	11	16	25	25	26	25	20	16	14	13	14
Awnings and canopies, total	89	101	98	97	132	129	132	147	152	105	114
Sheet	72	83	80	78	111	109	111	122	130	86	93
Extruded shapes	16	17	17	18	20	18	19	22	19	16	18
Extruded pipe & tube [3]	1	1	1	1	1	2	2	1	1	1	1
Drawn tube [3]	—	—	—	—	—	—	—	1	1	1	1
Welded tube [4]	—	—	—	—	—	—	—	1	1	1	1
Residential siding, total incl. soffits & fascia	299	384	412	425	503	465	454	407	469	326	396
Sheet	297	382	410	423	501	463	452	405	467	324	394
Extruded shapes	2	2	2	2	2	2	2	2	2	2	2
Mobile homes, total	110	126	139	145	178	185	193	183	217	161	174
Ingot	4	4	4	4	5	6	5	5	5	4	4
Total mill products	106	122	135	141	173	179	188	178	212	157	170
Sheet	59	69	79	83	104	103	114	111	140	106	115
Extruded shapes	47	53	56	58	69	76	74	67	72	51	55
Bridge, street & highway, total	139	137	110	121	133	138	131	112	112	95	93
Ingot	13	12	12	12	14	16	16	16	14	13	12
Total mill products	126	125	98	109	119	122	115	96	98	82	81
Sheet	73	72	52	62	71	72	65	52	61	47	48
Foil	1	1	1	1	1	1	1	1	1	1	1
Extruded shapes	27	26	21	22	22	23	22	20	19	15	16
Pipe & tube [3]	24	25	23	23	23	24	25	22	16	18	15
Rod & bar [1]	1	1	1	1	2	2	2	1	1	1	1

NOTE: See footnote page 20.

Trends in Selected Markets*
1981-1991

TRANSPORTATION — Millions of Pounds

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Trucks & buses, total	367	433 r	454	496	470	436	419	466	357	273	310
Ingot	175	199 r	210	225	205	200	200	212	183	151	148
Total mill products	192	234	244	271	265	236	219	254	174	122	162
Sheet	101	126	129	148	144	128	123	151	96	68	85
Plate	5	6	7	6	6	5	5	4	4	3	4
Foil	1	1	1	1	1	1	1	1	—	—	—
Rod & bar [1]	1	2	2	2	2	1	1	1	2	2	2
Extruded shapes	50	60	61	68	70	65	55	60	49	32	45
Extruded pipe & tube [3]	3	3	3	3	2	2	2	1	1	1	1
Drawn tube [3]	—	—	—	—	—	—	—	1	1	1	1
Bare wire	—	—	—	—	—	—	—	—	—	—	—
Forgings	30	35	40	42	39	33	31	34	20	14	23
Impacts	1	1	1	1	1	1	1	1	1	1	1
Passenger cars, total	1,376	1,492 r	1,540	1,691	1,617	1,484	1,547	1,542	1,279	911	1,105
Ingot	990	1,057 r	1,089	1,198	1,149	1,040	1,109	1,108	917	662	781
Total mill products	386	435	451	493	468	444	438	434	362	249	324
Sheet	219	252	267	313	296	286	274	284	235	156	199
Plate	2	2	2	2	2	1	1	1	1	1	1
Foil	50	55 r	59	56	55	47	46	43	40	26	28
Rod & bar [1]	22	21	21	22	20	22	20	18	19	9	9
Extruded shapes	37	42	46	46	49	46	53	43	34	37	59
Extruded pipe & tube [3]	34	38	40	39	33	26	27	22	18	9	13
Drawn tube [3]	—	—	—	—	—	—	—	5	3	1	4
Bare wire	2	2	2	2	2	3	3	4	1	1	1
Forgings	17	20	12	11	9	11	12	12	10	8	8
Impacts	3	3	2	2	2	2	2	2	1	1	2
Trailers & semitrailers, total	324	360	412	424	450	388	386	425	301	174	211
Ingot	21	23 r	27	28	32	28	30	31	20	17	20
Total mill products	303	337	385	396	418	360	356	394	281	157	191
Sheet	127	141	156	153	167	143	140	158	124	62	78
Plate	6	8	8	9	9	10	11	9	7	4	7
Rod & bar [1]	1	1	1	1	1	1	1	1	1	1	1
Extruded shapes	162	180	214	229	237	203	201	222	147	88	103
Extruded pipe & tube [3]	2	2	3	3	3	2	2	2	1	1	1
Bare wire	3	3	2	1	1	1	1	2	1	1	1
Forgings	2	2	1	—	—	—	—	—	—	—	—

Trends in Selected Markets

Trends in Selected Markets*
1981-1991

CONSUMER DURABLES											Millions of Pounds
	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Air conditioners, freezers, refrigerators, total	333	362	433	446	417	375	315	337	275	219	290
Ingot	31	34	39	39	35	36	33	32	30	25	33
Total mill products	302	328	394	407	382	339	282	305	245	194	257
Sheet	113	132	152	157	150	134	118	125	108	95	117
Foil	128	131	164	163	150	129	113	132	104	75	109
Rod & bar (1)	1	1	1	1	1	1	1	1	2	0	0
Extruded shapes	26	30	33	33	32	31	17	15	13	12	13
Extruded pipe & tube (3)	34	34	44	53	49	44	33	30	16	11	14
Drawn tube (3)	—	—	—	—	—	—	—	2	2	1	4
Portable appliances, total	42	45	50	51	52	49	47	53	55	44	59
Ingot	23	24 r	26	27	28	30	28	31	30	26	31
Total mill products	19	21	24	24	24	19	19	22	25	18	28
Sheet	16	18	21	21	21	17	16	18	21	14	23
Extruded shapes	2	2	2	2	2	1	2	2	2	3	3
Extruded pipe & tube (3)	1	1	1	1	1	1	1	1	1	1	1
Rod & bar (1)	—	—	—	—	—	—	—	1	1	—	1
Cooking utensils, total	117	120	119	142	159	151	150	175	206	136	171
Ingot	18	18	19	21	24	26	25	26	24	22	26
Total mill products	99	102	100	121	135	125	125	149	182	114	145
Sheet	96	99	97	118	132	122	121	144	177	109	140
Extruded shapes	2	2	2	2	2	2	3	4	4	4	4
Bare wire	1	1	1	1	1	1	1	1	1	[illegible]	1
CONTAINERS & PACKAGING											
Household & institutional foil, total	268	266	269	281	285	270	267	270	283	270	287
Metal cans, total	4,167	4,026	3,923	3,698	3,732	3,502	3,381	3,251	3,140	2,858	2,725
Sheet	4,167	4,026	3,923	3,698	3,732	3,502	3,381	3,251	3,140	2,858	2,725
Semi-rigid food containers, total	133	143	151	161	163	167	157	173	158	134	153
Sheet	15	16	19	25	30	27	25	33	21	19	38
Foil	118	127	132	136	133	140	132	140	137	115	115

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** - These selected markets represent either those in which the Association has marketing programs or which are important aluminum categories. They only account for a portion of aluminum shipments to each major market.*

(1) Extruded rod and bar combined with rolled and continuous cast rod and bar.

(2) Shipment to Passenger Cars cover new domestic automobile production, spare parts, accessories and after-market parts. Shipments for light trucks and vans are included in Trucks and Buses.

(3) Drawn tube combined with extruded pipe and tube.

(4) Welded tube combined with sheet.

NOTE: For information prior to 1981, see the Aluminum Statistical Review - Historical Supplement

SOURCE: Estimated by the Statistical & Market Research Committee of The Aluminum Association.

U.S. Aluminum Supply

U.S. ALUMINUM SUPPLY
The U.S. aluminum supply increased 157 thousand metric tons in 1991 to a total of 8,020 thousand metric tons. This represents a 2.0 percent rise compared to the 1990 supply level. Primary production at 4,121 thousand metric tons was up 1.8 percent from the 1990 production of 4,048 thousand metric tons.

Primary imports of 1,029 thousand metric tons were 6.9 percent more than the 1990 level of 962 thousand metric tons. Imports of mill products decreased 19.6 percent to 369 thousand metric tons during 1991 as compared to 459 thousand metric tons in 1990.

Import data reflect the reimports of metal exported for processing and returned for further processing.

Secondary recovery (domestic and imports) was 2,501 thousand metric tons, up 4.5 percent from 1990.

The graph on page 22 illustrates the relative change in the portions of total aluminum supplies from each source for the years 1981 through 1991.

The table on page 23 details the total supply of aluminum and its principal sources for the years 1942 through 1991 before any adjustments for stockpile deliveries or withdrawals.

U.S. primary aluminum production over the past decade is outlined on the graph and detailed in the table on page 25.

Installed capacity by company is presented for the years 1981 through 1991 on page 26. The 1991 year-end primary aluminum capacity in the U.S. was 4,133 thousand metric tons, an increase of 0.9 percent over 1990 levels.

Aluminum recovery from scrap is an important contributor to the total aluminum supply. Data showing the increase in the source of supply for the years 1946 through 1991 are presented on pages 30 and 31.

Used beverage cans are an increasingly important part of the U.S. aluminum supply. In 1991, U.S. consumers recycled almost 57 billion cans totaling 1,969 million pounds.

Total Supply

1991 SUPPLY UP 2.0 PERCENT
Total supply increased 2.0 percent to 8,020 thousand metric tons in 1991.

Changes vs. 1990

Primary Production	+ 1.8%
Imports, Primary	+ 6.9%
Imports, Mill Prods	-19.6%
Secondary Recovery	+ 4.5%

Since 1981 the total supply has expanded at an average rate of 2.3 percent a year. In 1991 primary production represented 51.4 percent of total supply; imports accounted for 17.4 percent; and secondary recovery represented 31.2 percent.

In the ten years 1981-1991, secondary recovery grew at a 3.8 percent annual rate, while primary production increased at a 0.7 percent annual rate.

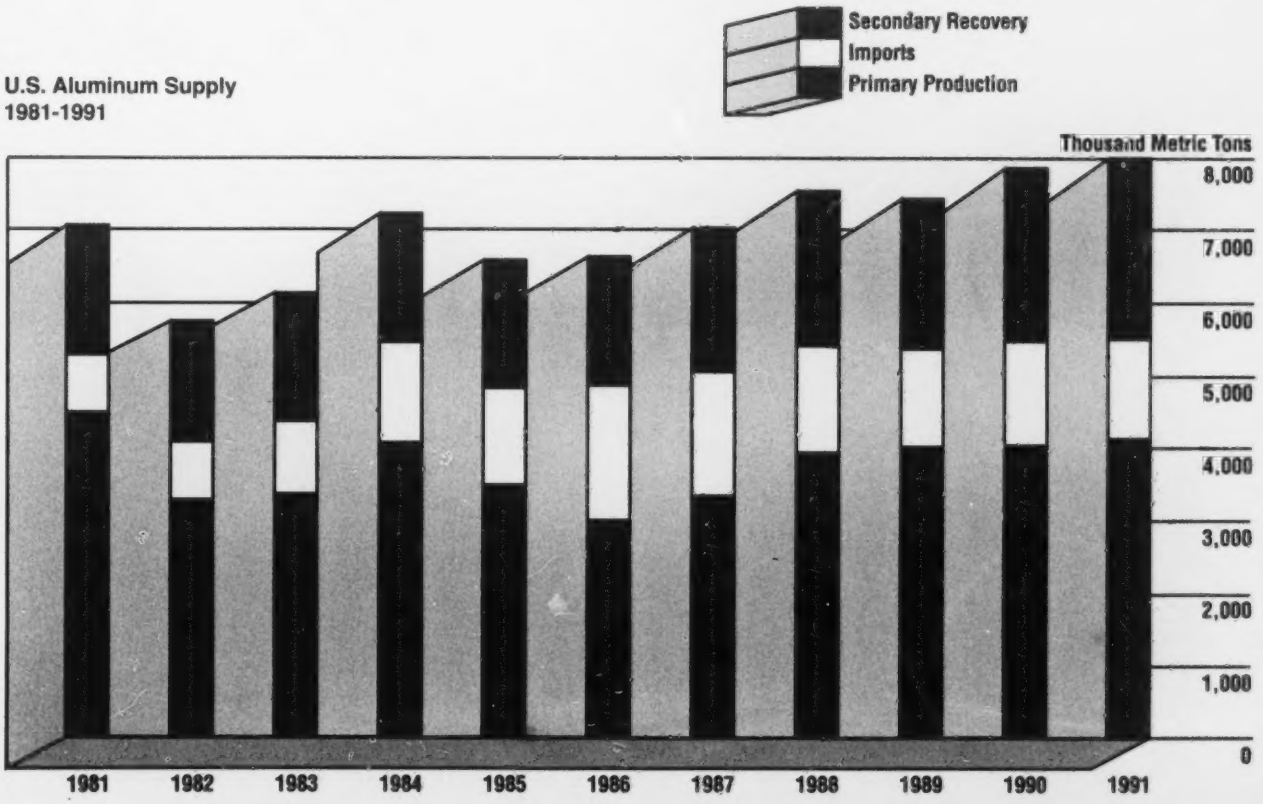
DESCRIPTION:

United States supply of aluminum consists of domestic primary production, imports of primary and mill products, and metal recovered from scrap. No adjustment is made in this presentation for shipments or withdrawals from the government stockpile.

Detailed data on United States supply of aluminum from 1942 to 1991 are shown in the table on page 23.

For a picture of domestic primary production, see page 25. For the relationship of domestic primary production to world production, see pages 44-45. For a breakdown of imports, see pages 38-39. For further information on secondary recovery, see pages 30 and 31.

U.S. Aluminum Supply
1981-1991



Total Supply
1942 - 1991

Thousands of Metric Tons

Year	Total Supply	Domestic Primary Production	Imports			Secondary Recovery		
			Total	Primary[1]	Mill Products[3]	Total	Domestic[2]	Imported Scrap[1][2]
1942	753	473	102	97	5	178	178	(*)
1943	1,242	835	123	123	(*)	285	285	(*)
1944	1,092	704	91	91	(*)	297	295	1
1945	1,029	449	305	302	3	275	271	4
1946	674	371	39	38	1	264	252	12
1947	859	519	14	14	(*)	326	313	13
1948	965	566	81	75	5	319	260	59
1949	822	547	78	70	7	197	164	33
1950	1,099	652	171	161	10	276	221	55
1951	1,171	759	130	111	19	282	265	16
1952	1,264	850	131	116	15	282	276	6
1953	1,795	1,136	303	273	30	356	334	22
1954	1,830	1,325	214	201	13	291	284	7
1955	2,014	1,420	200	179	21	393	376	18
1956	2,153	1,523	232	210	22	398	388	10
1957	2,133	1,495	224	205	20	415	404	11
1958	2,009	1,420	259	232	28	329	321	8
1959	2,457	1,773	268	218	50	416	407	9
1960	2,406	1,828	178	140	38	401	397	4
1961	2,402	1,727	230	181	49	445	440	5
1962	2,796	1,921	341	282	59	533	528	5
1963	3,118	2,098	419	377	42	601	593	8
1964	3,372	2,316	409	357	51	648	641	7
1965	3,817	2,499	543	479	65	774	752	22
1966	4,116	2,693	591	475	116	833	805	28
1967	4,254	2,966	466	408	59	821	797	25
1968	4,572	2,953	684	622	62	935	904	31
1969	4,991	3,441	484	425	59	1,067	1,043	24
1970	4,950	3,607	406	318	88	937	907	30
1971	5,146	3,561	582	503	78	1,004	953	51
1972	5,445	3,740	684	598	86	1,022	1,022	[2]
1973	5,759	4,109	523	461	63	1,127	1,127	[2]
1974	6,123	4,448	511	461	50	1,163	1,163	[2]
1975	5,093	3,519	453	394	59	1,121	1,121	[2]
1976	5,799	3,857	608	522	86	1,334	1,334	[2]
1977	6,256	4,117	683	608	75	1,456	1,456	[2]
1978	6,783	4,358	907	688	220	1,518	1,518	[2]
1979	6,880	4,557	711	518	193	1,612	1,612	[2]
1980	6,833	4,653	603	527	76	1,577	1,577	[2]
1981	7,061	4,489	782	645	138	1,790	1,790	[2]
1982	5,762	3,274	823	616	207	1,666	1,666	[2]
1983	6,149	3,353	1,023	743	281	1,773	1,773	[2]
1984	7,235	4,099	1,376	882	494	1,760	1,760	[2]
1985	6,594	3,500	1,332	869	463	1,762	1,762	[2]
1986	6,655	3,039	1,843	1,349	494	1,773	1,773	[2]
1987	7,035	3,347	1,702	1,246	456	1,986	1,986	[2]
1988	7,534	3,945	1,467	1,027	440	2,122	2,122	[2]
1989	7,437	4,030	1,353	926	427	2,054	2,054	[2]
1990	7,863	4,048	1,421	962	459	2,393	2,393	[2]
1991	8,020	4,121	1,398	1,029	369	2,501	2,501	[2]

Detail may not add due to rounding.

(*) Less than 0.5 metric tons - CONVERSION FACTOR: One metric ton = 2,204.6 pounds

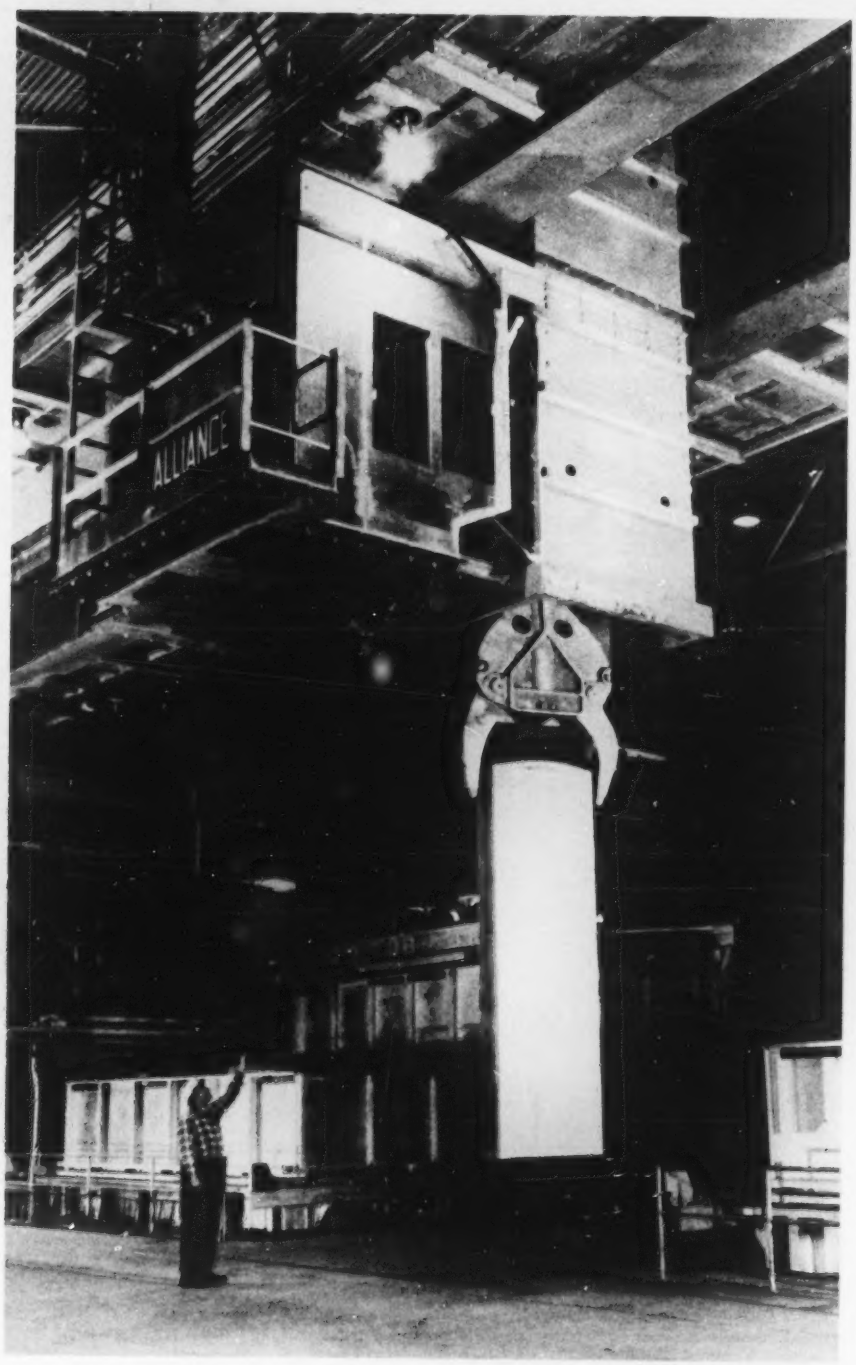
(1) Some imports of starter metal, classified by the Bureau of the Census in 1954-57 as scrap, have been classified as primary metal, as estimated by the Dept. of Commerce.

(2) Domestic secondary data are recoverable metal content for estimated total scrap consumption, as estimated by the Bureau of Mines. Before 1972, total supply included secondary recovery and an estimated 90 percent recovery from reported scrap imports. Beginning in 1972 the Bureau of Mines required reporting of imported scrap recovery data and these data are included in the domestic recovery figures beginning that year.

(3) Starting in 1970, includes reimports of metal exported for processing and returned for further processing.

SOURCE: U.S. Department of Commerce - Bureau of the Census and U.S. Department of Interior - Bureau of Mines

U.S. Suppliers' Inventories



The U.S. continues to be the world's largest producer of primary aluminum with 1991 production totaling 4,121 thousand metric tons and accounting for 22.8 percent of the world's production. Shown here, an aluminum ingot is moved fresh from the mold to the rolling mill.

INVENTORIES DOWN 2.5 PERCENT

The Bureau of the Census began reporting U.S. Suppliers' aluminum inventory in 1968. The figures include all forms of scrap, ingot, metal in process and finished products. During 1991 inventories decreased by 100 million pounds to a year-end inventory of 3,913 million pounds.

U.S. Suppliers' Inventories 1981-1991

Millions of pounds at the end of the year

	Type of Supplier			
Year*	Total	Integrated	Non Integrated	Secondary Smelter
1981	6,607	5,542	798	266
1982	6,199	5,224	759	216
1983	4,994	3,979	853	163
1984	5,850	4,692	929	229
	Total	**Ingot**	**Scrap**	**Other**
1985	5,165	2,235	567	2,364
1986	4,928	1,973	630	2,324
1987	4,175	1,466	587	2,123
1988	4,151	1,410	650	2,091
1989	4,016	1,377	655	1,985
1990	4,013	1,347	605	2,061
1991	3,913	1,453	562	1,898

Detail may not add due to rounding

** Prior to 1981 consult the Aluminum Statistical Review - Historical Supplement*

SOURCE: U.S. Department of Commerce, Bureau of the Census - Current Industrial Reports

Production of Primary Aluminum

PRODUCTION UP 1.8 PERCENT
Primary aluminum production totaled 4,121.2 thousand metric tons in 1991 vs. the production of 4,048.3 thousand metric tons in 1990. In the decade 1981-1991 the average annual rate of change was 0.7 percent.

DESCRIPTION:

In the United States, primary production of aluminum was begun in 1888 by the Pittsburgh Reduction Company. Data on aluminum production started in 1893, covering the industry from its very early period.

Data for 1981-1991 are presented here for your review. Data prior to 1981 may be obtained from the Aluminum Statistical Review-Historical Supplement.

Production of Primary Aluminum in U.S.A. 1981-1991

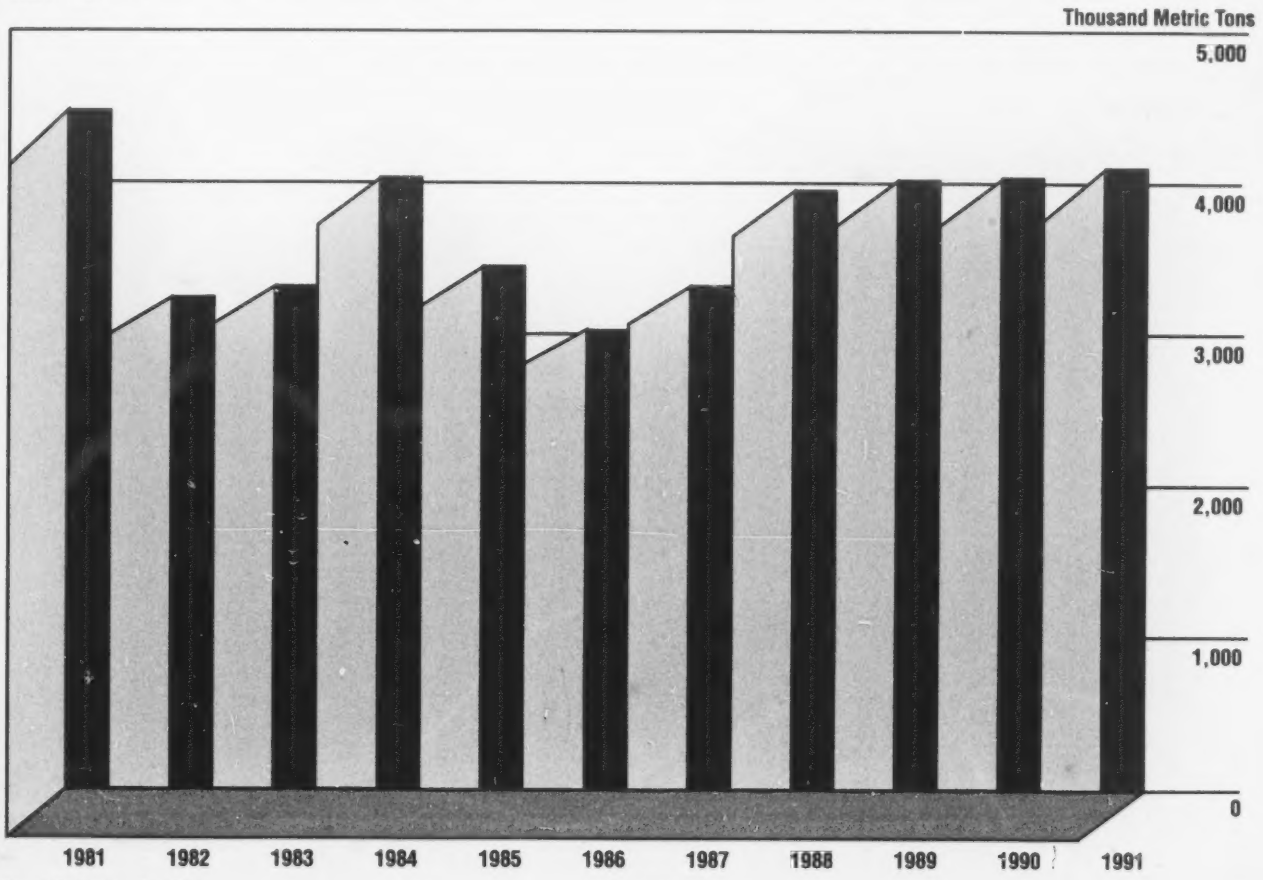
Year*	Thousands of Metric Tons
1981	4,488.7
1982	3,273.7
1983	3,353.3
1984	4,099.1
1985	3,499.7
1986	3,038.7
1987	3,346.9
1988	3,944.5
1989	4,030.2
1990	4,048.3
1991	4,121.2

CONVERSION FACTOR: One metric ton = 2,204.6 pounds

SOURCE: The Aluminum Association, Inc.

** Prior to 1981, consult the Aluminum Statistical Review - Historical Supplement*

U.S. Primary Aluminum Production 1981-1991



Source: The Aluminum Association

U.S. Primary Aluminum Capacity

CAPACITY UP 0.9 PERCENT FROM PREVIOUS YEAR

Total annual primary aluminum installed capacity as of December 31, 1991 was 4,132.7 thousand metric tons, up 0.9 percent from the 1990 revised total of 4,096.8 thousand metric tons.

The percentage distribution of U.S. primary capacity by company at year-end 1991 was: Alcoa, 31.0%; Alumax, 15.2%; Reynolds, 10.8%; Kaiser, 6.6%; Ormet, 5.9%; Noranda, 4.9%; Southwire, 4.5%; Columbia Falls, 4.1%; Columbia Aluminum, 4.1%; Ravenswood, 4.0%; Alcan, 4.0%; Vanalco, 2.8%; Northwest Aluminum, 2.0%.

DESCRIPTION:

There were thirteen domestic primary producer companies as of December 31, 1991. They were Alcan Aluminum Corp., Aluminum Company of America, Alumax Inc., Columbia Falls Aluminum, Columbia Aluminum Corp., Kaiser Aluminum & Chemical Corporation, Noranda Aluminum Incorporated, Northwest Aluminum, Ormet Corp., Ravenswood Aluminum Corp., Reynolds Metals Company, Southwire Company and Vanalco, Inc.

U.S. Primary Aluminum Capacity [1]
1981-1991

Thousands of Metric Tons

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Aluminum Company of America	1,285.0	1,285.0	1,285.0	1,155.0	1,155.0	1,095.0	1,430.0	1,429.7	1,429.7	1,429.7	1,564.9
Alumax, Inc. [3]	629.0	600.0	600.0	600.0	600.0	600.0	599.0	595.1	595.1	385.6	377.1
Reynolds	448.0	448.0	448.0	448.0	422.8	422.8	422.8	781.1	884.5	884.5	884.5
Kaiser	273.1	273.1	273.1	383.8	383.8	526.2	526.2	526.2	656.8	656.8	656.8
Ormet Corp. [6]	244.9	244.9	244.9	244.9	244.9	244.9	—	—	—	—	—
ARCO Aluminum [2][5]	—	—	—	—	—	—	—	326.6	326.6	326.6	326.6
Consolidated	—	—	—	—	—	—	227.2	292.3	294.1	326.8	319.3
Howmet [3]	—	—	—	—	—	—	—	—	—	207.0	198.4
Noranda	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	204.1	127.0
Revere	—	—	—	—	—	—	184.7	184.9	184.9	184.9	184.3
Commonwealth [4]	—	—	—	—	—	167.8	167.8	—	—	—	—
Columbia Aluminum [7]	167.8	167.8	167.8	167.8	167.8	—	—	—	—	—	—
Ravenswood Aluminum [9]	166.0	166.0	166.0	—	—	—	—	—	—	—	—
Alcan Aluminum Corp. [5]	163.3	163.3	163.3	163.3	163.3	163.3	163.3	—	—	—	—
Columbia Falls	168.0	168.0 r	163.3	163.3	163.3	163.3	163.3	—	—	—	—
Vanalco	115.9	115.0	115.0	115.0	115.0	—	—	—	—	—	—
National Aluminum	—	—	95.4	95.4	95.4	95.4	95.4	93.9	86.2	81.6	81.6
Northwest Aluminum [8]	81.6	81.6	81.6	81.6	81.6	81.6	—	—	—	—	—
Southwire [10]	186.0	180.0 r	79.6	79.6	79.6	79.6	79.6	78.5	86.2	81.6	81.6
Martin Marietta	—	—	—	—	—	—	81.6	249.5	249.5	249.5	190.5
Total	4,132.7	4,096.8 r	4,087.1	3,901.8	3,876.6	3,844.0	4,345.1	4,761.9	4,997.7	5,018.8	4,992.8

r - revised

(1) Capacities shown are as reported as of December 31. They include nominal ownership of plants owned by more than one company.
(2) Formally the Anaconda Company, Aluminum Division.
(3) Alumax acquired Howmet in 1983.
(4) Commonwealth acquired 67% of Martin Marietta in 1985.
(5) Alcan and Columbia Falls acquired 50% each of ARCO Aluminum in 1985.
(6) Formally included with Consolidated and Revere.
(7) Formally Commonwealth's Goldendale plant.
(8) Formally Martin Marietta's The Dalles plant.
(9) Formally included with Kaiser Aluminum & Chemical Corp.
(10) 100% interest in National-Southwire purchased by Southwire in 1990.

NOTE: Prior to 1981, consult the Aluminum Statistical Review - Historical Supplement.

SOURCE: The Aluminum Association, Inc.

CONVERSION FACTOR: One metric ton = 2,204.6 pounds

Number of Plants in the U.S.

Number of Plants in the U.S.

Selected Years

Product	1992	1985	1982
Primary Ingot	23	30	32
Secondary Ingot	68	69	76
Sheet & Plate	48	44	58
Foil	21	26	27
Drawing Stock (Rolled and Continuous Cast)	(a)	18	22
Wire, Bare, Conductor & Nonconductor	21	61	69
ACSR and Aluminum Cable, Bare	14	16	16
Wire & Cable, Insulated or Covered	37	43	43
Extruded Products (Shapes, Rod & Bar, Extruded and Drawn Tube)	190	217	226
Drawn Tube	(a)	19	19
Welded Tube	(b)	16	18
Powder + Paste	16	19	17
Forgings	47	48	44
Impacts	13	13	16

(a) Included in extruded products
(b) Included in sheet and plate

SOURCE: The Aluminum Association, Inc.

The data presented here are based on a survey conducted by The Aluminum Association in 1992.

The figures shown for each product's selected years represent the number of plants, not companies, which in many instances operate more than one plant.

No totals are shown since some plants produce more than one product. Data includes captive plants (plants producing only for company's own use).

Five outline maps of the United States, indicating the geographic distribution of aluminum plants by various product groups in 1992, are presented on pages 27-29.

For a detailed listing of plants, contact The Aluminum Association for a copy of the U.S. Aluminum Industry Plant Directory (March, 1992).

★ *Primary*
■ *Secondary*

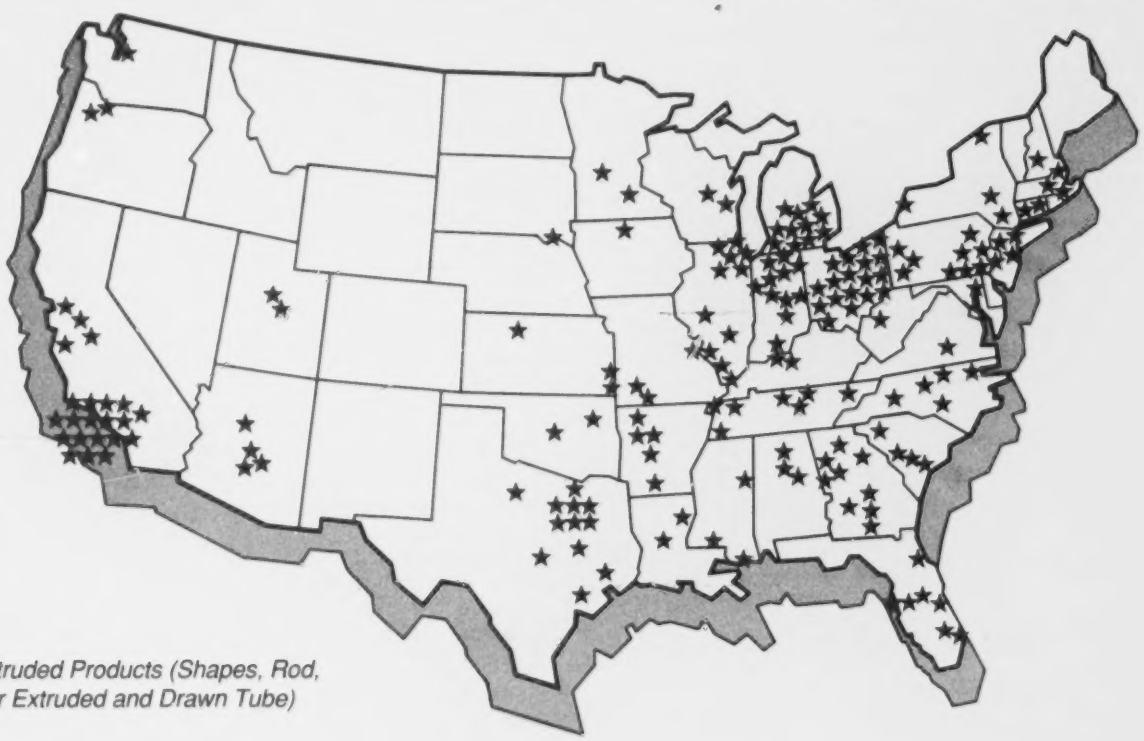
● *Foil*

★ *Sheet and Plate*

● *Bare Wire*

★ *Drawing Stock (Rolled & Continuous Cast)*

■ *ACSR & Bare Cable and/or Insulated/Covered Wire & Cable*



★ *Extruded Products (Shapes, Rod, Bar Extruded and Drawn Tube)*

■ *Forgings and/or Impacts*

● *Powder & Paste*

Aluminum Scrap Consumption and Recovery

SCRAP CONSUMPTION INCREASES 5.0 PERCENT

According to preliminary data from the Bureau of Mines, total domestic industry scrap consumption on a gross weight basis, increased 5.0 percent to a 1991 level of 2,825 thousand metric tons from the 1990 volume of 2,690 thousands metric tons.

Secondary recovery totaled 2,501 thousand metric tons with new scrap accounting for 39 percent and old scrap for 61 percent.

Old scrap recovery at 1,522 thousand metric tons was up 12.0 percent from 1990. Reclamation from aluminum cans increased to an estimated 893 thousand metric tons, up 1.8 percent from 1990 accounting for 62.4% of can shipments.

DESCRIPTION:

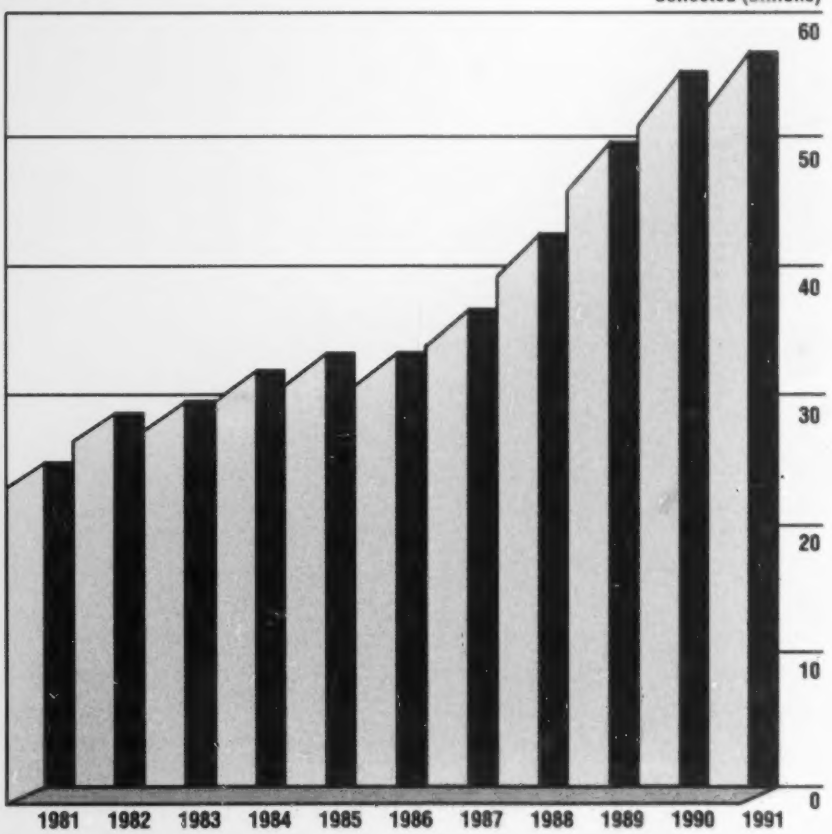
Recovery of aluminum from scrap, an important source of supply, is shown on pages 30 and 31. Two sets of scrap data are tabulated. The scrap consumption figures are on a gross weight basis as estimated by the Bureau of Mines based on data collected from companies consuming scrap. The aluminum recovery figures are on a recovered metal basis, that is the content of aluminum base alloy recovered from gross weight consumed. The figures in this table are consistent with domestic secondary recovery on page 23.

The aluminum recovery data are shown by source, that is by new and old scrap. New (industrial) scrap, generated by plants making end products, and old (consumer) scrap recovered from metal that has been used by consumers, are returned to plants making ingot and mill products and thus add to the total metal supply.

Through 1954, data on scrap consumption and recovery are based on complete reporting. Beginning in 1955, reported figures are expanded to industry totals by the Bureau of Mines to allow for a number of firms who do not report. In 1961, sweated pig consumption data were improved and included in old scrap.

Recovery of new scrap and old scrap over the past ten years has been about 28 percent of total supply (31.2 percent in 1991). However, this figure does not include "run-around" scrap consumed by the generating companies.

Aluminum Can Reclamation Data 1981-1991



[1]Calculation based on an Association can weight survey.

Aluminum Can Reclamation 1981-1991

Year	Pounds of Aluminum Collected (millions)	No. of Aluminum Cans Collected (billions)[2]	Percent of Aluminum Cans Collected[3]
1981	1,017 [1]	24.9	53.2
1982	1,124 [1]	28.3	55.5
1983	1,144 [1]	29.4	52.9
1984	1,226 [1]	31.9	52.8
1985	1,245 [4]	33.1	51.0
1986	1,233 [4]	33.3	48.7
1987 [5]	1,335 [4]	36.6	50.5
1988	1,505 [4]	42.5	54.6
1989	1,688 [4]	49.4	60.8
1990	1,934 [4]	55.0	63.6
1991	1,969 [4]	56.8	62.4

SOURCE:
(1) Net Receipts - U.S. Department of Interior Bureau of Mines
(2) Calculation based on an Aluminum Association can weight survey
(3) Based on Can Manufacturers Institute aluminum beverage can shipment data - lagged on quarter
(4) Estimated by The Aluminum Association Statistical and Market Research Committee
(5) Beginning in 1987, UBC data includes estimate of exported can scrap

Aluminum Scrap Consumption and Recovery 1946-1991

Thousands of Metric Tons

SCRAP CONSUMPTION		SCRAP CONSUMPTION (Gross Weight Basis) As Reported[6]				RECOVERY[5] (Recovered Metal Basis)		
Year	Total Industry[1]	Total	Secondary Smelters	Primary Producers[3]	Others[4]	Total Industry	From New Scrap	From Old Scrap
1946	312.1	312.1	215.9	90.7	5.4	252.3	170.1	82.1
1947	372.9	372.9	283.1	81.7	8.1	312.8	164.2	148.6
1948	294.4	294.4	197.5	91.1	5.8	260.2	173.4	86.8
1949	180.6	180.6	116.5	59.5	4.5	164.0	123.5	40.5
1950	247.8	247.8	174.2	62.0	11.6	221.1	151.8	69.3
1951	301.5	301.5	210.8	73.0	17.7	265.5	196.0	69.5
1952	315.5	315.5	231.4	70.7	13.3	276.3	211.6	64.7
1953	375.0	375.0	250.6	105.2	19.1	334.4	262.7	71.6
1954	318.0	318.0	216.9	83.0	18.1	284.0	223.7	60.3
1955	444.5	387.4	284.7	78.7	24.0	375.6	285.3	90.3
1956	469.0	398.6	301.0	80.5	17.0	388.3	300.3	88.0
1957	482.6	420.0	313.0	85.3	21.8	403.8	315.3	88.5
1958	390.1	340.7	250.2	70.1	20.4	321.1	249.0	72.1
1959	489.0	431.8	348.8	57.1	25.9	407.3	313.0	94.3
1960	474.5	400.5	321.0	49.3	30.1	397.3	311.1	86.2
1961	525.3	451.9	300.9	40.4	110.5	440.0	298.9	141.1
1962	635.0	539.7	401.1	33.1	105.4	527.9	376.9	151.0
1963	707.6	587.4	447.4	40.7	99.3	593.3	449.1	144.2
1964	771.1	646.1	489.0	53.5	103.7	641.4	494.4	147.0
1965	880.0	740.8	526.0	86.2	128.6	752.1	566.1	186.0
1966	979.8	813.1	579.5	113.8	119.8	805.2	635.3	169.9
1967	961.6	800.9	559.9	111.6	129.4	796.5	638.2	158.3
1968	1,105.0	920.9	634.4	138.1	148.4	904.5	740.3	164.2
1969	1,207.5	1,006.2	673.2	178.6	154.3	1,043.2	861.8	181.4
1970	1,058.7	882.3	590.0	139.0	153.3	907.2	728.5	178.7
1971	1,097.7	911.5	580.5	154.9	176.1	952.6	756.6	196.0
1972	1,217.5	1,045.5	640.9	186.2	218.4	1,021.5	794.7	226.8
1973	1,343.6	1,145.3	668.4	192.8	284.0	1,126.7	886.3	240.4
1974	1,313.6	1,094.1	571.7	216.8	305.6	1,163.0	887.2	275.8
1975	1,319.1	1,117.8	554.8	311.0	252.0	1,121.3	815.6	305.7
1976	1,579.4	1,329.5	688.6	331.3	309.6	1,334.4	963.4	371.0
1977	1,681.9	1,422.7	763.2	386.2	273.3	1,456.0	974.3	481.7
1978	1,733.6	1,466.5	800.8	396.8	268.9	1,517.7	996.1	521.6
1979	1,832.5	1,546.8	836.6	401.2	309.0	1,612.1	1,055.1	557.0
1980	1,798.1	1,536.5	802.2	491.5	242.8	1,576.7	959.8	616.9
1981	2,031.2	2,031.2	1,036.0	663.2	332.0	1,789.9	1,031.5	758.4
1982	1,900.6	1,900.6	880.0	673.1	347.5	1,665.6	883.6	782.0
1983	2,018.9	2,018.9	897.0	774.0	347.9	1,773.0	953.0	820.0
1984	2,010.0	2,010.0	872.0	782.0	356.0	1,760.0	935.0	825.0
1985	1,978.0	1,978.0	923.0	727.0	328.0	1,762.0	912.0	850.0
1986	1,986.0	1,986.0	883.0	781.0	322.0	1,773.0	989.0	784.0
1987	2,204.0	2,204.0	878.0	964.0	362.0	1,986.0	1,134.0	852.0
1988	2,348.0	2,348.0	950.0	1,025.0	373.0	2,122.0	1,077.0	1,045.0
1989	2,280.0	2,280.0	877.0	1,027.0	376.0	2,054.0	1,043.0	1,011.0
1990	2,690.0	2,561.4	982.0	1,212.4	367.0	2,393.0	1,034.0	1,359.0
1991p	2,825.0	2,686.7	1,080.1	1,260.8	345.9	2,501.0	979.0	1,522.0

p-preliminary

(1) As reported, 1946-54; estimates expanded from reported, 1955 to present
(2) For 1951-53 includes small amounts reported consumed by nonintegrated fabricators
(3) Represents 100% scrap consumption coverage by primary producers
(4) Most consumption of sweated pig apparently not reported by 'others' prior to 1961
(5) Recovery from sweated pig included in new scrap 1946-1960, old scrap 1961 to present
(6) Figures 1981 to present represent estimated full coverage

SOURCE: U.S. Department of Interior, Bureau of Mines and U.S. Department of Commerce, Bureau of Economic Analysis
CONVERSION FACTOR: One metric ton = 2,204.6 pounds

U.S. Aluminum Foreign Trade Statistics

IMPORTS ACCOUNT FOR 17.4 PERCENT OF U.S SUPPLY

For the year 1991 imports of aluminum ingot and mill products accounted for 17.4 percent of total aluminum supply in the United States. Exports comprised 17.9 percent of total industry shipments. These facts illustrate the major role of foreign trade in the U.S. aluminum industry.

1991 imports of aluminum ingot rose 6.9 percent to 2,268 million pounds as compared with 2,121 million pounds in 1990. Imports of semifabricated products decreased in 1991, declining to 814 million pounds, down 19.5 percent from 1990.

Exports of aluminum ingot rose in 1991 to 1,754 million pounds, a 18.0 percent increase from a 1990 level of 1,512 million pounds. Exports of semifabricated products increased to 1,275 million pounds, a 20.9 percent increase over 1990.

Exports of aluminum scrap showed a 13.7 percent decline to a 1,023 million pound level.

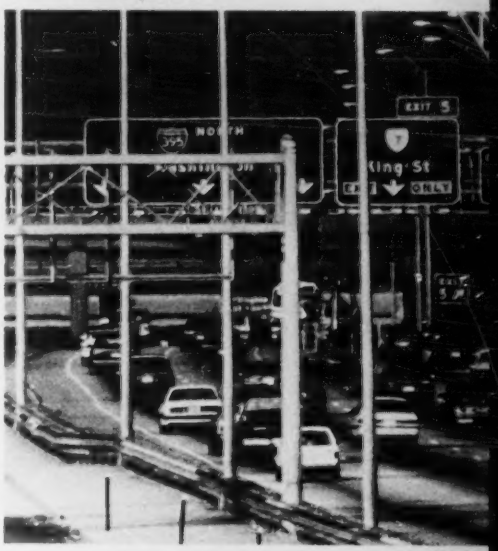
In 1991 the U.S. was a net exporter of aluminum by an amount of 490 million pounds.

The product composition of United States imports and exports for the years 1981-1991 is graphically presented on pages 34 and 35. The data for total imports and exports, as well as the detail of aluminum product imports and exports for 1991 and the preceding 10 years, are tabulated on pages 36 and 37. The total imports include dross and skimmings and the gross weight of scrap. In the table on United States Supply (page 23), dross and skimmings are excluded, and the recovered weight of imported scrap is used. It is counted as part of domestic secondary recovery for the years 1972-1991 and shown as a separate supply component for years prior to 1972.

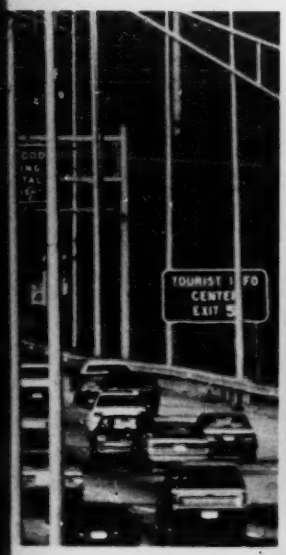
The detail of 1991 aluminum imports by product and country of origin is presented on pages 38 and 39. Similarly, the exports on a product basis by country of destination are detailed on pages 40 and 41.

For information on years prior to 1981 see the Aluminum Statistical Review-Historical Supplement.

During 1991, shipments to the bridge, street and highway market totaled 139 million pounds, up an estimated 1.5 percent from the 1990 total of 137 million pounds.



Shipments to the cookware industry have been declining over the past several years. In 1991, shipments totaled 117 million pounds, down 3 million pounds from the previous year and almost half of the 1983 peek of 206 million pounds.



Aluminum continues to play an important role in the construction of trailers and semi-trailers. In 1991, shipments to this market decreased to a total of 324 million pounds, following overall declining trailer production.

Shipments of aluminum to the containers and packaging industry continues to lead the industry's output, representing 29 percent of total domestic shipments.

U.S. Imports

IMPORTS DECREASE 4.2 PERCENT

According to figures released by the Bureau of the Census, aluminum imports totaled 3,563 million pounds during 1991, down 4.2 percent from 1990. Ingot, which accounted for 63.6 percent of all aluminum imported during 1991 increased 6.9 percent to 2,268 million pounds. Canada, again, topped the list with imports of 2,115 million pounds, 93.3 percent of total ingot imports.

Imports of semifabricated aluminum products decreased in 1991, falling 19.5 percent to 814 million pounds. Canada led the list of over 90 countries exporting semifabricated products to the U.S. with a total of 432 million pounds or 53.1 percent of total semifabricated products imports. Aluminum sheet imports, at 618 million pounds were down 19.6 percent. Canada and Japan were the largest sources at 61.5 percent and 12.8 percent of the total respectively.

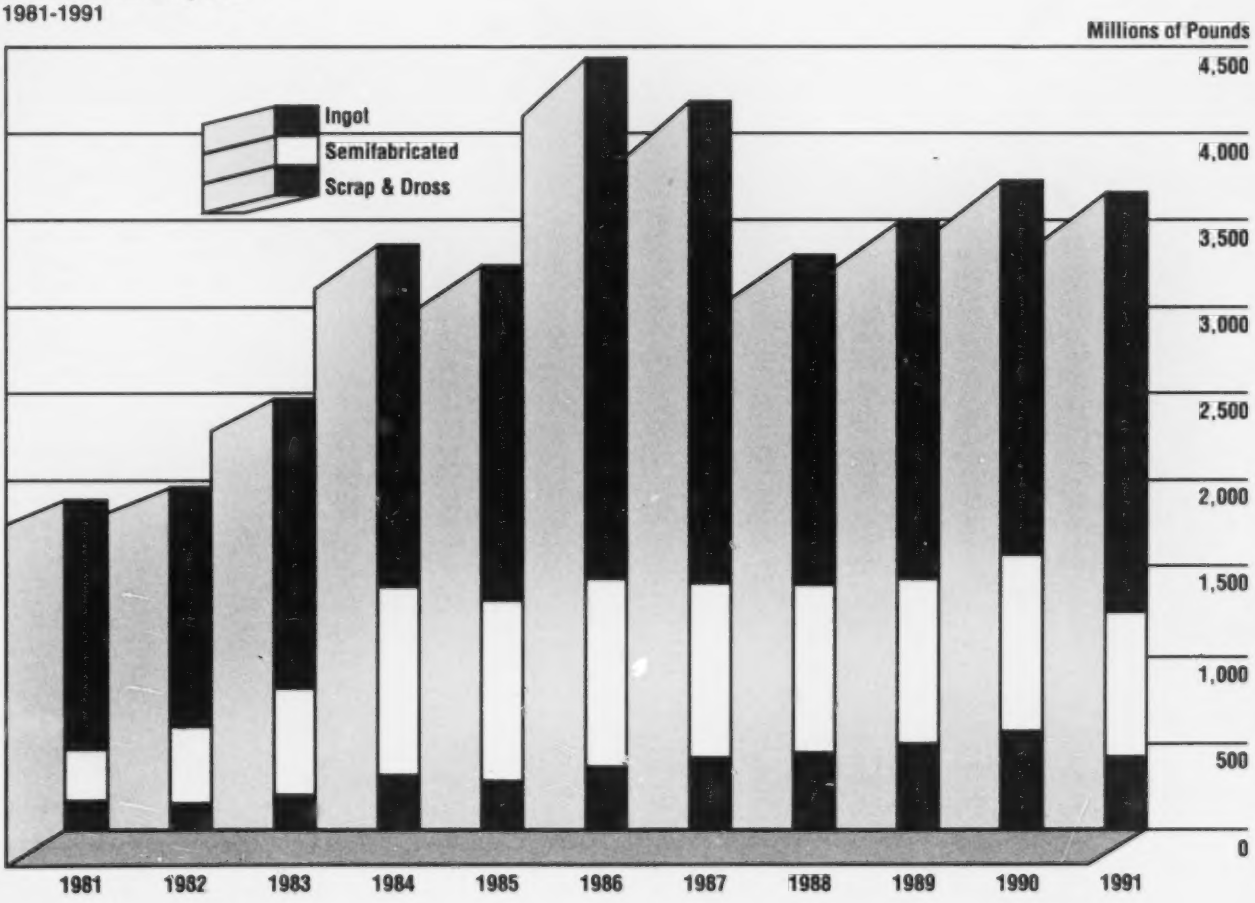
1991 scrap imports decreased 17.8 percent to 481 million pounds from a 1990 level of 585 million pounds.

Penetration of the U.S. market by imported semifabricated products declined to 5.0 percent in 1991.

DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum imports in the years 1981-1991. In addition to showing the imports of ingot, scrap and dross, and skimmings, the upper half of the table on pages 36 and 37 shows in detail, the categories of imports for the years 1981-1991. Imports of aluminum by country for the year 1991 are shown on pages 38 and 39.

U.S. Aluminum Imports 1981-1991



SOURCE: The Aluminum Association

U.S. Exports

U.S. EXPORTS INCREASE 8.0 PERCENT

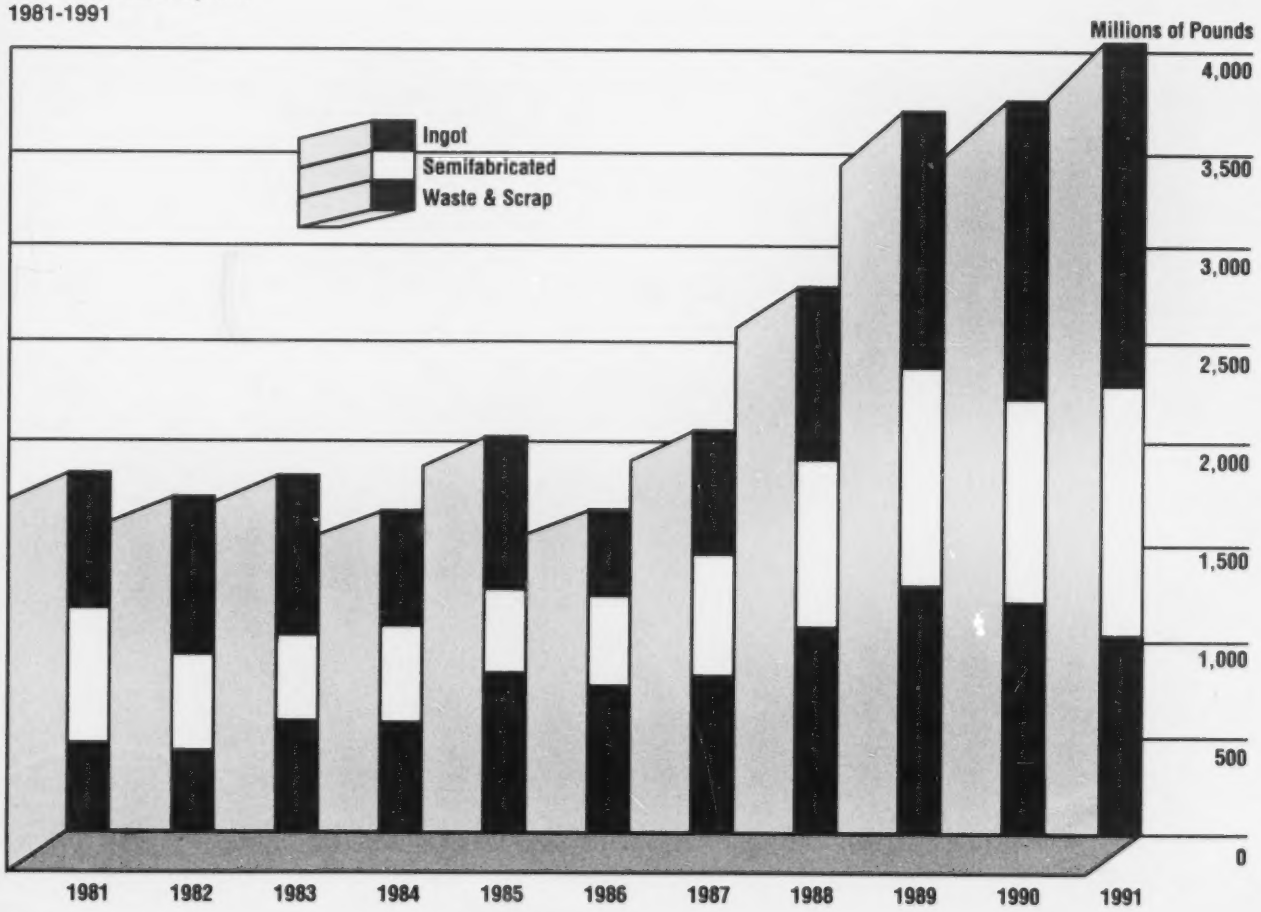
The Bureau of the Census also reported that total aluminum exports during 1991 were 4,053 million pounds, up 8.0 percent from 1990. Ingot exports rose 16.0 percent to 1,754 million pounds from a 1990 level of 1,512 million pounds. Semifabricated exports of 1,275 million pounds increased 20.9 percent over 1990 levels of 1,055 million pounds. Exports of scrap dropped from 1,186 million pounds in 1990 to 1,023 million pounds in 1991, a decline of 13.7 percent.

Of the over 100 countries receiving aluminum from the United States in 1991, 1,967 million pounds were shipped to Japan, 48.5 percent of the total. Exports to Japan included 1,352 million pounds of ingot, 562 million pounds of scrap and 53 million pounds of semifabricated products. Exports to Canada totalled 824 million pounds in 1991, 136 million pounds of ingot, 99 million pounds of scrap and 589 million pounds of semifabricated products.

DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum exports in the years 1981-1991. In addition to showing the imports of ingot, scrap and dross, and skimmings, the lower half of the table on pages 36 and 37 shows in detail, the categories of imports for the years 1981-1991. Exports of aluminum by country for the year 1991 are shown on pages 40 and 41.

U.S. Aluminum Exports
1981-1991



SOURCE: The Aluminum Association

United States Imports and Exports

United States Imports & Exports 1981-1991

Thousands of Pounds

PRODUCT	1991	1990	1989	1988	1987
Total Imports	3,562,847	3,717,888	3,473,349	3,691,740	4,171,462
Total Ingot & Semifabricated	3,082,111	3,133,291	2,982,768	3,234,635	3,750,942
Ingot	2,267,685	2,121,078	2,040,607	2,264,691	2,745,882
Semifabricated, total	814,380	1,012,213	942,161	969,944	1,005,060
Sheet & Plate, total	682,164	865,551	760,871	732,709	765,311
Circles & disks	23,125	32,035	33,152	31,733	35,424
Other	659,039	833,516	727,719	700,976	729,887
Foil, total	53,497	67,998	53,929	72,881	64,255
Over .00035 in.	23,466	35,508	31,771	42,063	39,491
Not over .00035 in.	30,031	32,490	19,616	27,832	21,853
Capacitor	n/a	n/a	2,542	2,985	2,910
Rod & bar	19,263	35,756	46,942	98,398	117,314
Wire, bare	28,715	15,520	46,755	17,489	11,545
ACSR & bare cable	10,834	1,650	1,836	7,998	5,594
Angles & shapes	4,753	7,869	12,688	20,185	18,687
Pipe & tube	4,746	5,800	4,031	8,465	10,270
Powder & paste	6,186	7,753	10,713	11,819	12,084
Castings	3,424	4,136	4,181	n/a	n/a
Forgings	798	180	214	n/a	n/a
Scrap & Dross	480,804	584,597	490,581	457,104	420,521
Total Exports	4,052,550	3,753,414	3,698,732	2,806,348	2,067,956
Total Ingot & Semifabricated	3,029,285	2,567,101	2,406,414	1,733,545	1,255,570
Ingot	1,754,395	1,512,319	1,310,618	881,976	619,859
Semifabricated, total	1,274,890	1,054,782	1,095,796	851,569	635,712
Sheet & Plate, total	980,599	841,259	834,028	685,398	502,877
Foil, total	61,149	47,777	77,538	34,421	32,003
Rod & bar	25,876	27,706	39,939	24,447	23,005
Wire, bare	59,115	23,045	15,936	10,731	10,141
ACSR & bare cable	24,723	15,726	12,807	4,471	1,808
Angles & shapes	71,551	48,603	43,770	25,811	28,406
Pipe & tube	22,954	21,992	16,992	17,016	14,783
Powder & paste	12,749	13,236	9,632	11,878	7,471
Castings	7,334	8,258	30,558	29,787	7,959
Forgings	8,839	7,180	14,596	7,610	7,258
Scrap & Dross	1,023,266	1,186,313	1,292,319	1,072,803	812,385
Net Imports *	(489,635)	(35,526)	(225,383)	885,392	2,103,506

Detail may not add to totals due to rounding
** - Imports less exports*
na - Not available

NOTE: Prior to 1981, consult the Aluminum Statistical Review - Historical Supplement

SOURCE: U.S. Department of Commerce, Bureau of the Census

1986	1985	1984	1983	1982	1981
4,426,199	3,223,576	3,353,255	2,465,217	1,966,647	1,894,847
4,062,513	2,935,770	3,034,098	2,255,700	1,814,325	1,725,220
2,973,633	1,915,099	1,944,381	1,637,353	1,358,751	1,421,311
1,088,880	1,020,671	1,089,717	618,347	455,574	303,909
836,049	770,093	884,498	536,059	414,819	247,139
32,059	25,936	29,144	19,131	16,404	11,673
803,990	744,157	855,354	516,929	398,415	235,466
60,285	57,176	54,005	29,238	19,328	13,430
33,218	37,733	27,045	12,345	8,749	4,791
24,113	17,891	23,631	15,226	8,708	6,608
2,954	1,552	3,329	1,666	1,870	2,031
128,922	128,703	82,269	27,435	10,057	34,238
14,487	21,105	26,966	6,444	3,202	3,220
4,930	4,472	5,337	2,021	101	8
18,459	16,312	12,690	3,478	1,272	1,320
13,452	7,381	8,981	3,170	1,279	1,167
12,296	15,430	14,971	10,503	5,515	3,388
n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a
363,686	287,806	319,156	209,518	152,322	169,627
1,676,082	2,030,140	1,646,169	1,818,397	1,723,285	1,852,324
910,790	1,204,187	1,076,484	1,240,875	1,294,687	1,370,001
462,068	765,648	572,316	795,216	802,348	688,321
448,722	438,539	504,169	445,659	492,339	681,680
359,818	329,311	402,992	318,667	323,074	411,385
13,256	12,031	11,917	10,952	12,933	21,338
21,262	22,853	22,133	24,374	51,980	102,463
6,755	8,932	6,162	9,972	11,791	24,653
1,139	5,704	5,699	35,845	46,953	70,324
15,541	11,686	11,137	10,310	9,298	8,507
9,736	10,389	10,492	9,480	13,157	15,216
6,000	6,278	8,086	5,075	6,082	6,769
9,780	20,190	21,488	18,199	14,359	17,860
5,435	7,166	4,064	2,785	2,711	3,165
765,292	825,953	569,685	578,522	428,598	482,323
2,750,117	1,193,436	1,707,086	645,820	243,362	42,523

United States Imports by Product and Country

United States Imports by Product and Country — 1991

Thousands of Pounds

Country	Total	Ingot	Scrap Dross and Skimmings	Semi-fabricated Products	Sheet	Plate	Circles & Discs
TOTAL	3,562,847	2,267,685	480,782	814,380	618,196	40,843	23,125
NORTH AMERICA	2,970,291	2,115,087	416,835	438,369	380,826	6,051	7,820
Canada	2,903,277	2,114,767	356,805	431,706	379,565	6,051	4,487
Mexico	67,014	319	60,031	6,664	1,260	—	3,332
LATIN AMERICA	224,275	133,282	31,820	59,174	33,856	213	1,467
Argentina	10,003	8,525	—	1,479	40	43	—
Bahamas	3,279	—	3,260	20	—	—	—
Brazil	18,300	12,970	—	5,330	806	—	58
Colombia	1,021	—	1,020	1	—	—	—
Costa Rica	4,995	—	256	4,739	423	—	—
Jamaica	1,707	—	1,707	—	—	—	—
Panama	4,942	548	4,395	—	—	—	—
Trinidad	1,077	—	1,077	—	—	—	—
Venezuela	175,369	111,240	16,666	47,463	32,587	169	1,408
Other	3,582	—	3,439	142	—	—	—
EUROPEAN COMMUNITY	191,332	6,910	22,368	162,054	92,184	26,966	6,277
Belgium	30,896	2	5,337	25,557	8,694	10,317	4,735
Denmark	99	52	—	47	13	—	—
France	47,775	331	6,637	40,807	27,645	9,704	488
Germany, Fed. Rep.	61,699	4,309	2,034	55,356	28,032	2,463	125
Greece	1,453	121	—	1,332	691	79	85
Ireland	207	—	177	29	—	—	—
Italy	4,311	61	—	4,250	2,886	312	—
Netherlands	12,267	231	2,656	9,379	9,234	63	6
Portugal	*	—	—	*	—	—	—
Spain	8,903	4	255	8,643	5,888	368	837
United Kingdom	23,722	1,798	5,271	16,653	9,101	3,662	2
OTHER EUROPE	48,778	576	2,873	45,329	24,864	5,729	2,275
Austria	1,615	—	—	1,615	1,231	44	107
Hungary	5,975	*	—	5,975	3,882	289	1,577
Norway	2,011	284	—	1,727	1,686	1	—
Poland	1,048	237	675	135	—	—	—
Sweden	8,525	39	400	8,087	6,061	10	—
Switzerland	3,431	4	*	3,427	1,098	175	—
USSR	1,798	—	1,798	—	—	—	—
Yugoslavia	23,589	—	—	23,589	10,213	5,211	591
Other	785	12	—	774	694	—	—
EAST ASIA	87,626	1,137	518	85,970	69,264	697	4,390
China, PRC	792	181	98	514	158	72	—
Hong Kong	3,907	77	—	3,830	6	205	3,559
Japan	80,092	790	224	79,078	68,839	408	830
Koreaqn Rep.	681	71	—	610	11	1	*
Taiwan, ROC	2,153	19	196	1,939	249	12	1
Other	68	—	22	46	*	—	—
SOUTH ASIA	24,734	5,962	5,405	13,368	10,430	89	38
Arab Emirates	7,192	5,962	—	1,230	—	—	—
Bahrain	10,271	—	—	10,271	9,051	—	—
Israel	6,414	—	5,361	1,053	853	25	—
Other	858	—	44	814	526	64	38
OCEANIA	5,314	3,220	924	1,170	415	738	—
Australia	3,995	3,220	743	31	17	—	—
New Zealand	1,139	—	—	1,139	398	738	—
Other	180	—	180	—	—	—	—
AFRICA	10,497	1,511	40	8,946	6,358	361	859
Ghana	738	—	—	738	698	—	39
South Africa, Rep.	9,019	1,511	—	7,509	5,350	13	779
Other	740	—	40	700	310	348	40

(*) Indicates less than 500 pounds. Detail may not add due to rounding

SOURCE: U.S. Department of Commerce, Bureau of the Census

Total Foil	Rod and Bar	Wire	ACSR and Bare Cable	Angles, Shapes & Sections	Pipes Tubes & Fittings	Powder and Paste	Castings	Forgings
53,497	19,263	28,715	10,834	4,753	4,746	6,186	3,424	798
12,273	2,446	20,582	2,145	2,226	1,235	1,526	1,229	11
12,273	2,050	20,523	2,145	2,155	1,227	766	453	11
*	397	59	—	71	8	761	776	—
5,591	2,055	6,499	8,456	915	43	59	20	2
37	1,134	225	—	—	—	—	—	—
—	—	—	—	—	—	20	—	—
729	630	2,223	721	112	2	39	9	2
—	—	—	—	1	—	—	—	—
4,316	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
509	269	4,033	7,723	723	40	—	—	—
—	22	18	12	78	—	—	11	—
25,773	6,057	386	21	859	1,360	1,966	143	61
84	1,696	—	—	28	*	2	—	—
7	25	2	—	—	—	*	—	—
2,239	259	125	—	13	316	6	9	4
21,217	73	25	20	748	940	1,700	5	6
460	—	—	—	17	—	—	—	—
1	—	—	—	—	8	19	1	—
611	310	11	*	7	2	105	6	—
18	11	—	1	6	18	—	23	—
—	—	—	—	—	—	—	*	—
861	663	—	—	—	8	13	5	—
273	3,020	223	—	39	69	119	94	51
3,640	6,289	205	200	389	19	860	142	716
107	7	—	—	116	2	2	—	—
100	—	—	—	—	—	126	—	—
—	1	1	—	—	*	—	2	36
—	—	—	—	—	—	—	135	—
1,257	2	5	*	8	8	732	4	—
1,425	30	—	*	10	9	—	*	680
—	—	—	—	—	—	—	—	—
673	6,249	199	200	253	—	—	—	—
78	—	—	—	2	*	—	—	—
4,734	1,184	1,042	9	339	2,086	533	1,685	9
—	—	—	—	—	—	180	100	4
—	*	*	—	—	—	—	60	—
4,464	1,133	1,034	9	162	1,910	269	21	—
229	—	5	—	*	*	71	288	4
40	51	3	—	177	176	14	1,216	—
—	*	*	*	—	—	—	46	—
150	1,231	*	*	24	*	1,239	167	—
—	1,230	—	—	—	—	—	—	—
—	—	—	—	—	—	1,220	—	—
—	1	—	—	24	*	20	130	—
150	*	*	*	—	—	—	37	—
—	1	2	3	*	*	2	9	—
—	1	2	—	*	*	2	9	—
—	—	—	3	—	—	—	—	—
—	—	—	—	—	—	—	—	—
1,338	—	—	—	—	2	—	29	—
—	—	—	—	—	—	—	—	—
1,338	—	—	—	—	—	—	29	—
—	—	—	—	—	2	—	—	—

United States Exports by Product and Country

United States Exports by Product and Country — 1991

Thousands of Pounds

Country	Total	Ingot	Waste & Scrap	Semi-fabricated Products	Sheet	Plate	Circles & Discs
TOTAL	4,052,550	1,754,395	1,023,266	1,274,890	788,190	188,768	3,640
NORTH AMERICA	1,104,974	210,713	156,393	737,868	569,961	33,065	1,544
Canada	824,089	135,736	99,215	589,138	489,095	22,735	1,400
Mexico	280,885	74,977	57,178	148,730	80,866	10,330	143
LATIN AMERICA	94,577	7,053	12,728	74,796	21,125	39,901	81
Argentina	1,926	65	817	1,044	605	14	—
Bahamas	1,218	—	575	643	182	5	—
Brazil	20,704	225	8,447	12,032	8,736	1,014	—
Colombia	2,931	34	—	2,897	934	1,708	2
Costa Rica	1,225	149	29	1,046	173	204	—
Dominican Rep.	2,161	115	345	1,701	392	34	—
El Salvador	2,605	1,979	64	562	257	18	—
Guatamala	2,403	136	1,493	774	399	16	—
Jamaica	2,529	1,334	5	1,189	422	225	—
Panama	6,405	1,643	40	4,723	615	3,484	—
Trinidad	1,730	261	48	1,420	195	—	—
Venezuela	40,980	11	10	40,959	6,915	32,529	79
Other	7,761	1,101	855	5,805	1,298	649	—
EUROPEAN COMMUNITY	155,486	29,564	41,518	84,404	28,629	35,068	32
Belgium	4,717	34	387	4,295	95	1,854	7
Denmark	572	3	—	568	229	130	1
France	49,450	18,224	21,596	9,631	1,453	5,390	*
Germany, Fed. Rep.	25,245	754	4,867	19,624	5,993	10,955	3
Greece	802	35	1	766	628	84	—
Ireland	3,024	450	16	2,559	635	1,545	—
Italy	11,778	1,197	2,172	8,409	2,587	1,986	12
Netherlands	16,226	4,531	3,864	7,831	3,905	2,808	—
Portugal	54	7	—	48	23	1	—
Spain	4,778	164	1,216	3,398	997	1,731	—
United Kingdom	38,840	4,166	7,398	27,275	12,083	8,583	10
OTHER EUROPE	13,453	1,006	3,426	9,021	4,221	1,544	120
Finland	3,091	—	3,009	82	46	9	—
Norway	703	2	352	349	1	97	—
Sweden	4,022	392	—	3,629	1,552	362	39
Switzerland	1,297	502	23	772	162	136	81
Turkey	3,562	50	43	3,470	2,229	907	—
Other	779	59	—	719	232	33	—
EAST ASIA	2,536,266	1,484,041	799,067	253,158	143,650	25,695	1,820
China, PRC	51,118	273	7,702	43,143	36,769	327	141
Korean Republic	166,227	48,550	72,589	45,088	12,634	7,712	15
Hong Kong	53,767	11,635	8,726	33,406	22,355	359	—
Taiwan, ROC	251,950	54,824	143,646	53,480	29,254	2,728	555
Japan	1,966,735	1,352,116	562,009	52,610	28,940	13,247	943
Other	46,470	16,644	4,394	25,432	13,697	1,321	166
SOUTH ASIA	133,502	20,152	7,503	105,847	19,741	52,053	21
Arab Emirates	2,965	9	38	2,918	1,336	24	—
India	2,144	93	1,059	991	51	51	—
Israel	14,386	2,259	66	12,061	1,377	1,284	—
Kuwait	3,172	—	—	3,172	164	2,070	—
Pakistan	1,835	—	1,652	183	17	—	18
Saudi Arabia	64,074	194	—	63,880	8,513	48,511	—
Thailand	43,520	17,595	4,688	21,237	7,811	111	3
Other	1,406	2	—	1,404	471	1	—
OCEANIA	7,749	727	2,073	4,948	461	1,145	23
Australia	6,329	646	2,018	3,665	353	1,067	3
New Zealand	1,179	2	10	1,166	64	63	20
Other	241	79	45	116	44	15	—
AFRICA	6,543	1,138	558	4,847	402	297	—
Egypt	3,266	—	—	3,266	323	102	—
South Africa, Rep.	1,211	216	245	749	24	34	—
Other	2,067	922	312	832	55	162	—

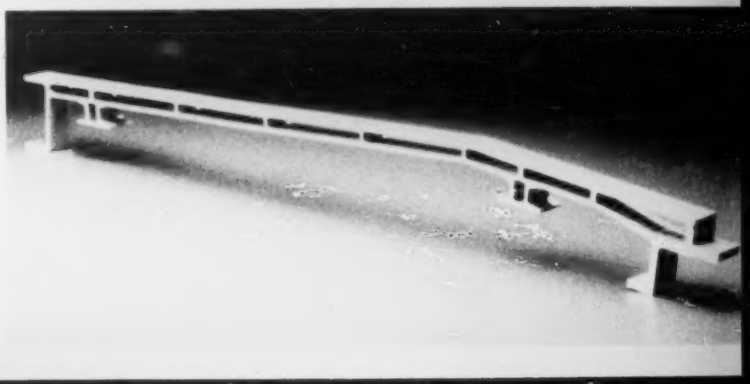
(*) Indicates less than 500 pounds. Detail may not add due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census

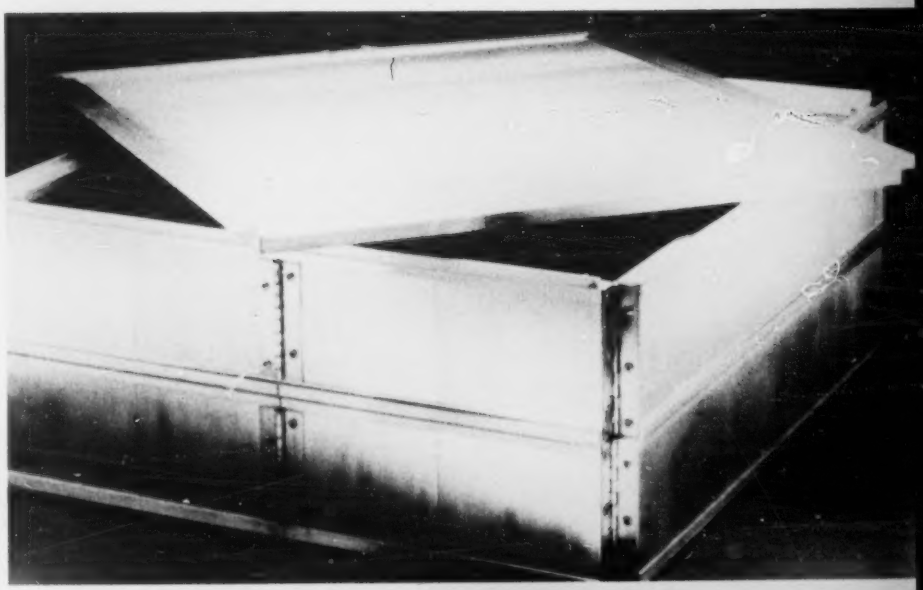
Foil	Rod and Bar	Wire	ACSR & Bare Cable	Angles, Shapes & Sections	Pipes & Tubes	Powder & Paste	Castings	Forgings
61,149	25,876	59,115	24,723	71,551	22,954	12,749	7,334	8,839
30,326	14,227	24,980	20,559	17,459	14,294	5,518	4,868	1,068
24,967	8,209	11,913	186	12,722	10,966	3,957	1,955	1,034
5,359	6,018	13,067	20,373	4,737	3,328	1,561	2,914	34
3,396	524	1,370	412	4,158	2,568	864	293	104
35	—	100	18	204	7	57	—	3
18	151	12	13	—	119	2	86	55
960	83	46	—	241	680	226	16	30
1	*	36	—	3	76	80	57	—
54	1	256	—	63	293	2	—	—
213	140	122	88	604	107	1	*	—
165	—	7	20	—	89	5	—	—
214	—	6	7	77	35	20	—	—
290	—	20	8	107	117	1	—	—
413	31	108	11	7	53	—	—	*
246	—	15	22	834	107	—	*	—
206	4	270	41	215	350	234	115	2
580	114	373	184	1,801	537	236	18	14
2,797	4,223	3,112	210	4,582	928	2,470	1,420	933
880	7	309	156	304	27	4	600	52
14	1	17	2	125	*	—	13	36
186	185	544	35	312	165	1,131	64	166
217	504	1,033	—	144	192	121	397	65
—	2	—	—	34	17	—	—	—
9	28	39	2	248	4	7	13	30
60	2,830	519	—	67	56	196	29	68
418	32	64	*	506	25	14	34	24
—	1	*	—	—	—	20	3	—
17	8	43	—	395	35	22	1	148
995	624	545	15	2,448	406	955	267	344
1,775	189	298	26	409	200	72	82	85
—	—	11	8	6	—	3	—	—
—	90	121	—	24	2	—	15	—
1,504	—	18	*	4	119	4	9	19
199	36	13	—	25	61	42	6	11
3	3	42	—	206	6	17	1	55
69	60	92	18	144	12	6	52	*
10,277	3,471	27,787	2,710	30,458	2,069	2,668	625	1,930
4,485	274	103	593	366	*	1	8	75
102	1,131	4,441	20	17,742	757	187	17	329
1,146	33	8,294	300	144	380	60	329	5
1,370	540	14,276	1,607	2,328	507	176	67	72
1,989	1,358	263	94	2,678	85	1,552	35	1,426
1,185	135	409	95	7,200	338	692	169	24
11,071	2,239	254	56	12,959	2,235	649	20	4,548
1,495	1	—	—	—	62	1	—	—
852	1	2	*	—	9	3	1	22
1,980	1,412	223	1	896	226	119	17	4,524
893	—	—	11	—	35	—	—	—
31	78	2	—	—	37	—	—	—
4,656	18	4	44	346	1,786	—	—	2
661	691	23	—	11,717	68	149	2	1
503	38	—	—	—	13	377	*	—
83	44	946	5	1,521	382	143	23	172
32	40	713	2	901	323	134	19	79
18	5	232	—	620	43	5	4	93
33	—	1	3	—	16	4	—	—
1,426	959	368	744	5	278	365	3	—
1,382	681	7	721	—	49	—	—	—
22	3	250	8	4	197	206	2	—
23	274	111	15	1	32	159	*	—

World Aluminum Statistics

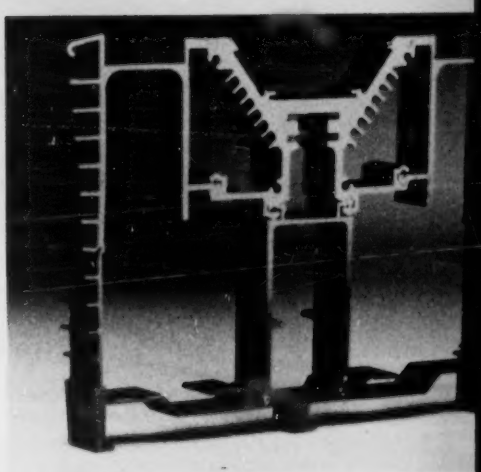
The aluminum industry is international by its very nature. From the extraction of its basic source material at bauxite sites located in a number of countries throughout the world to its fabrication and distribution in every nation on earth, the aluminum industry should be viewed in a world-wide perspective. This section attempts to provide data on two of the key aspects of world aluminum, world primary aluminum production and the apparent per capita consumption of aluminum for selected countries.



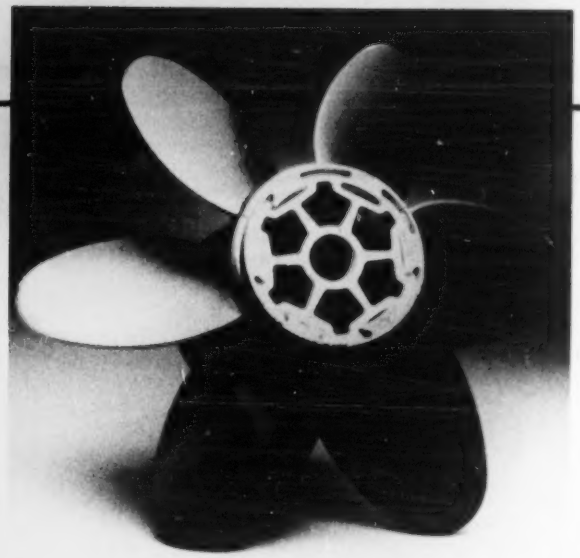
World production of primary aluminum in 1991 is estimated to have been 18,056 thousand metric tons, up 0.2 percent from the revised 1990 total of 18,013 thousand metric tons. World primary production is presented by country for the years 1981-1991 on page 45.



Data on the consumption of aluminum, on a per capita basis, are presented for 39 countries. These countries represent about three-quarters of the worlds production of primary aluminum. The data are presented in a uniform statistical format for the years 1981-1991. The data for supply and consumption show ingot and mill product detail for imports and exports. Midyear population figures are presented as part of the calculation of consumption on a per capita basis for each country.

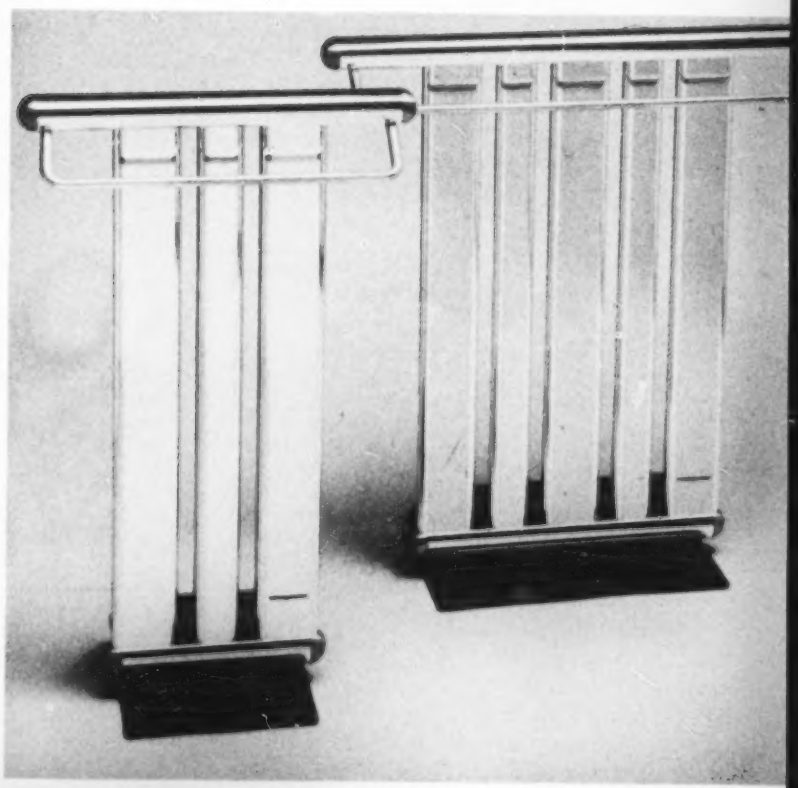


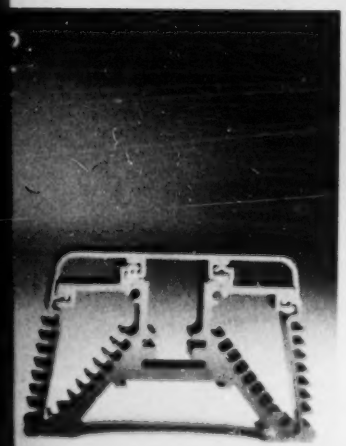
World aluminum statistical data is presented in metric tons, with one exception: the per capita aluminum consumption summary on page 47 is expressed in pounds per person per year. Individual country data tables show per capita consumption in kilograms.



Extrusions play a major role in aluminum's success story. U.S. domestic shipments of aluminum extruded shapes, pipe and tube, and rod and bar totaled 2.4 billion pounds in 1991.

A sampling of winners from The Aluminum Association's 1992 International Aluminum Extrusion Design Competition demonstrates how innovative aluminum extrusions improve products throughout the world. (Shown clockwise, from top, left) German high-speed trains benefit from extruded sidewall panels spanning 25 yards. From Ohio comes a boat propeller housing for six separate blades, enabling simple, inexpensive repairs. The extrustions used in this towel-warmer made possible the production of a dimensionally flexible product line from very few parts. A California company's switch to extrusions eliminates 109 machining operations and 32 fabricated parts in a machine used by car manufacturers. A Danish designed door post for a passenger car reduces tooling costs by 90 percent and weight by 40 percent. This container is not only a shipping container but also serves as a shelving, storage and packaging unit. Extruding alumimum allows for the intricate detail needed for the connecting of panels with minimum labor.





World Primary Aluminum Production

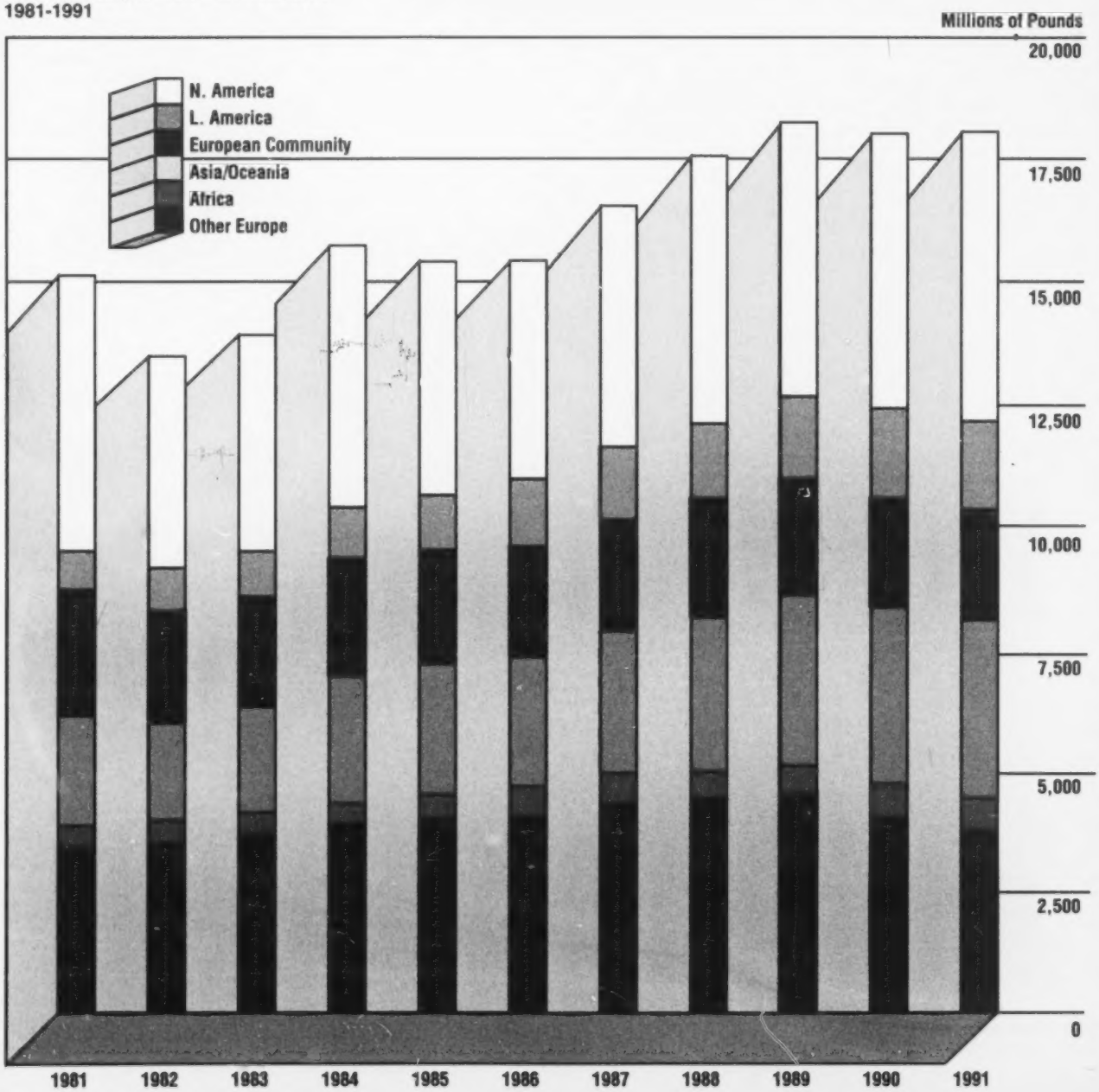
WORLD PRODUCTION UP 0.2 PERCENT

Estimated 1991 world production of primary aluminum totaled 18,056 thousand metric tons, up 0.2 percent from the revised estimate of 18,013 thousand tons in 1990, according to Bureau of Mines data.

Over the decade 1981-1991 world production increased 19.7 percent, an annual growth rate of 2.0 percent.

The United States accounted for 22.8 percent of the world's 1991 production while the European Community accounted for 12.5 percent. Other European countries, including former members of the Union of Soviet Socialist Republics, accounted for 21.0 percent. The remaining 43.6 percent includes Asia (11.6 percent), Canada (10.1 percent), South America (9.9 percent), Oceania (8.5 percent), and Africa (3.4 percent).

World Primary Aluminum Production 1981-1991



World Primary Aluminum Production
1981-1991

Thousands of Metric Tons

Country	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
TOTAL WORLD [1]	18,056	18,013 r	18,200 r	17,548 r	16,517 r	15,412	15,398	15,705	13,904	13,433	15,079
AFRICA	612	616 r	607 r	591	579	554	513	410	420	500	473
Cameroon	89	93 r	92 r	87	79	84	90	73	77	79	65
Egypt	178	179	180	173	179	175	209	170	140	141	134
Ghana	175	174	169	161	150	125	49	—	42	174	190
South Africa	170	170	166	170	171	170	165	167	161	106	84
NORTH AMERICA	5,951	5,615 r	5,585	5,478 r	4,883	4,392	4,782	5,321	4,444	4,339	5,605
Canada	1,830	1,567 r	1,555	1,534 r	1,540	1,355	1,282	1,222	1,091	1,065	1,116
United States	4,121	4,048	4,030	3,944	3,343	3,037	3,500	4,099	3,353	3,274	4,489
LATIN AMERICA	1,794	1,783 r	1,692	1,543	1,486	1,389	1,153	1,048	938	795	788
Argentina	165	166 r	162	154	153	148	136	134	133	138	134
Brazil	950	931	890	874	843	757	549	455	401	299	256
Mexico	51	68 r	72	68	60	37	43	44	40	41	43
Suriname	28	28 r	28	10	2	29	29	29	29	43	41
Venezuela	600	590 r	540	437	428	418	396	386	335	274	314
ASIA	2,091	2,012 r	1,995 r	1,775	1,577	1,488	1,568	1,595	1,390	1,417	1,682
Bahrain	210	213 r	187	183	180	178	176	177	172	171	130
China, P.R. [1]	860	850	850 r	710	615	410	410	400	400	380	350
India	440	433	423	375	265	257	260	269	204	217	213
Indonesia	185	186	197	185	202	219	217	199	115	33	-
Iran	67	59 r	45	40	45	40	43	42	39	45	13
Japan	32	34	35	35	41	140	227	287	256	351	771
Korea, Peop. Rep.	—	—	10	10	10	10	10	10	10	10	10
Korea, Republic of	2	2 r	18	18	22	19	18	18	13	15	18
Taiwan	—	—	—	—	—	—	—	—	—	10	31
Turkey	56	61 r	62	57	42	60	54	38	30	36	40
United Arab Imirates	239	174 r	168	162	155	155	153	155	151	149	106
EUROPEAN COMMUNITY	2,265	2,347 r	2,361 r	2,359 r	2,387 r	2,351	2,283	2,403	2,282	2,340	2,583
France	286	326	335	328	323	322	293	342	361	390	436
Germany, Fed. Rep. [4]	700	736	734 r	753 r	793 r	765	745	777	743	723	729
Eastern States	20	21 r									
Western States	680	715 r									
Greece	152	150	145 r	151	127	124	125	136	136	135	146
Italy	218	232	219	226 r	233	243	224	230	196	233	274
Netherlands	260	258	279	278	276	266	251	249	235	251	262
Spain	355	355	352	323	341	355	370	381	358	367	397
United Kingdom	294	290	297	300	294	276	275	288	253	241	339
OTHER EUROPE	3,800	4,098 r	4,458 r	4,388 r	4,349 r	4,120	4,007	3,927	3,733	3,498	3,415
Austria	80	89	93	95	93	93	94	96	94	94	94
Czechoslavakia [1][2]	68	70 r	69 r	67 r	68 r	33	32	32	36	34	33
German D.R. [1][4]	—	—	54	61	68 r	61	60	58	57	58	60
Hungary	64	75	75	75	76	74	74	74	74	74	74
Iceland	89	88	88 r	82	85	76	73	80	76	75	74
Norway	833	845	863	864	853	726	743	765	713	638	634
Poland [3]	45	46 r	48	48	48	48	47	46	44	43	66
Romania	158	168 r	269	265	260	269	247	244	223	208	242
Sweden	97	96	97	99	81	78	84	83	82	79	83
Switzerland	66	72	71	72	73	80	73	79	76	75	82
U.S.S.R [1]	2,000	2,200	2,400	2,400	2,400	2,300	2,200	2,100	2,000	1,900	1,800
Yugoslavia	300	349 r	331 r	260	244	282	280	270	258	220	173
OCEANIA	1,543	1,542 r	1,502	1,414	1,256	1,118	1,092	1,001	697	544	533
Australia	1,235	1,234	1,244	1,150	1,004	882	851	758	478	381	379
New Zealand	308	308 r	258	264	252	236	241	243	219	163	154

Detail may not add due to rounding

r-revised
(1) Estimated by the Bureau of Mines, U.S. Department of Interior
(2) Includes secondary unalloyed ingot
(3) Includes primary alloyed ingot
(4) German Democratic Republic & Federal Republic of Germany combined in 1990

SOURCE: Bureau of Mines, U.S. Department of Interior

Aluminium Supply and Apparent Consumption —

PER CAPITA CONSUMPTION DOWN FROM PREVIOUS YEAR

Per capita aluminum consumption for those countries which both 1991 and 1990 data were available, decreased an average of less than 1 percent in 1991 as compared with 1990. Of the 26 countries accounted for in our 1991 survey, only 9 (35%) showed increased or steady usage in 1991 while the remainder, 16 (65%) indicated decreased usage.

In 1991, the United States was the second largest user of aluminum on a per capita basis (58.9 pounds; 26.7 Kg.). The largest user was Japan, (69.7 pounds; 31.6 Kg.), followed by the U.S., West Germany (54.7 pounds; 24.8 Kg.), and Sweden (49.6 pounds; 22.5 Kg.).

Per Capita Aluminum Consumption Formula

1.	+	Primary aluminum production
2.	±	Government stockpile adjustment
3.	+	Imports of ingot
4.	+	Imports of mill products (aluminum alloy weight)
5.	+	Recovery of secondary aluminum alloys (from domestic and imported scrap)
6.	−	Exports of ingot
7.	−	Exports of mill products (aluminum alloy weight)
8.	=	Apparent aluminum consumption
9.	+	Beginning of year inventory
10.	−	End of year inventory
11.	±	Inventory change
12.	=	Aluminum consumption (with inventory change)
13.	÷	Mid-year population
14.	=	Per capita consumption (Kg.) (without inventory change)
15.	=	Per capita consumption (Kg.) (with inventory change)

The Aluminum Association, in conjunction with industry associations in foreign countries and, in some instances, appropriate government agencies, is developing a joint program to compile uniform statistical data showing total supply and apparent consumption. Total supply for an individual country consists of primary production, imports, and secondary recovery. Apparent consumption is equal to the sum of these sources of total supply less exports and inventory changes. Production of primary aluminum for the foreign countries is tabulated for the years 1981-1991 on page 45.

The tables on pages 48-61 show total supply and apparent consumption corresponding to the above format for the following countries:

Argentina
Australia
Austria
Bahrain
Belgium
Brazil
Cameroon
Canada
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
India
Ireland
Italy
Japan
Korea, Rep.
Mexico
Netherlands
New Zealand
Norway
Panama
Philippines
Portugal
El Salvadore
Saudi Arabia
Singapore
South Africa
Spain
Sweden
Switzerland
Taiwan
Turkey
United Kingdom
United States
Venezuela

The format for compiling total supply and apparent consumption data is shown below.

In order to develop a basis for showing relative aluminum usage by country and to provide a measure of trend over time, per capita consumption data is shown below.

In order to develop a basis for showing relative aluminum usage by country and to provide a measure of trend over time, per capita consumption data have been calculated for each country. For this purpose mid-year population estimates have been used. It is important to emphasize that these estimates are not the only way of measuring relative consumption data among countries. Obviously, the composition of a country's population, standard of living, industrialization, climate, availability and economies of other materials, and a number of other important considerations affect the per capita use of aluminum. The formula is used because it is simple and permits the Association to compile data for more countries, with their cooperation, than can be compiled using more detailed information.

When data for individual lines are not available or are not appropriate, they are omitted. Inventory changes cover suppliers' inventories only. Consumption estimates exclude changes in customer inventories.

The components of the formula are numbered and cross referenced to the country details on pages 41-61.

A summary of per capita consumption covering the years 1981-1991 for each of the countries is shown on page 47 in pounds.

Conversion factor:
One metric ton = 2,204.6 pounds.

Selected Countries

Per Capita Aluminum Consumption of Selected Countries 1981-1991

Pounds per person per year *(a)*

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Argentina *	4.5	2.9	3.6	5.0	5.5	4.7	2.7	5.6	5.4	4.8	4.0
Australia *	39.0	40.9	43.3	44.8	41.5	38.1	39.9	36.6	33.8	36.7	46.9
Austria *	44.1	47.3	47.7	40.0	31.2	32.0	27.7	28.9	25.6	23.8	26.5
Bahrain *	—	—	—	—	—	—	24.8	22.0	18.9	10.7	12.6
Belgium	27.6	27.3	17.0	23.7	17.7	23.4	21.4	25.9	21.0	20.5	16.2
Brazil *	3.6	4.0	5.5	4.9	6.2	6.9	5.8	4.8	4.9	5.4	5.1
Cameroon	2.8	2.8	3.5	2.6	3.8	4.5	4.7	3.2	1.6	3.6	3.4
Canada *	46.8	50.1	61.3	59.0	48.7	42.4	45.1	43.6	32.1	37.2	36.1
Denmark	36.1	39.1	n/a	22.9	18.9	21.1	19.4	20.1	30.2	30.5	27.3
Finland	17.1	22.0	24.0	23.1	20.8	19.7	14.3	13.0	11.5	14.6	14.1
France *	38.1	38.8	38.4	36.3	32.2	31.6	29.0	27.4	28.9	27.9	27.6
Germany, Federal Republic *	54.7	65.3	64.4	60.0	57.9	56.3	54.7	53.4	42.3	46.4	42.6
Greece	n/a	n/a	n/a	n/a	1.2	12.5	8.6	11.4	10.8	10.6	13.0
Hungary *	n/a	33.5	35.4	37.6	39.1	37.3	32.4	30.2	32.6	30.1	28.2
Iceland	19.2	14.8	22.7	25.4	23.2	18.1	17.3	19.3	27.8	23.5	27.9
India	1.2	1.2	1.2	1.0	1.0	0.9	0.9	1.0	0.7	0.7	0.8
Ireland	n/a	13.5	11.4	9.7	11.6	11.0	10.0	11.4	8.3	8.8	9.1
Italy *	43.7	43.5	41.3	39.7	36.3	32.2	30.1	29.6	27.1	25.4	27.6
Japan *	69.7	68.1	65.1	61.8	47.8	44.6	47.4	41.3	44.4	41.0	37.8
Korea, Republic of	n/a	n/a	n/a	n/a	n/a	n/a	9.9	9.9	9.3	7.5	6.8
Mexico *	6.5	5.7	3.3	2.5	2.9	2.8	4.6	3.5	2.5	4.8	6.5
Netherlands *	33.1	35.4	38.6	38.6	32.4	33.1	29.5	27.7	23.5	25.1	20.1
New Zealand *	17.5	22.6	24.6	22.8	26.3	22.4	22.2	20.9	18.4	15.5	20.5
Norway *	41.2	41.8	58.6	46.8	32.0	40.7	45.0	48.0	29.4	60.4	41.7
Panama	n/a	5.2	4.6	3.0	3.7	1.7	1.7	4.8	3.1	1.8	2.3
Philippines, Republic of	n/a	0.5	0.6	0.6	0.3	0.3	0.3	0.4	0.6	1.0	0.4
Portugal	13.8	13.9	13.2	11.9	12.1	11.1	9.4	6.9	10.0	11.0	11.0
El Salvador	n/a	0.7	0.7	0.7	0.7	0.4	0.1	0.4	1.1	0.6	0.7
Saudi Arabia, Kingdom of	n/a	n/a	n/a	18.7	16.1	13.0	30.2	19.8	46.3	9.5	25.1
Singapore, Republic of	n/a	41.9	4.1	45.8	49.8	25.5	25.8	26.1	22.9	22.9	25.7
South Africa, Republic of *	n/a	n/a	n/a	11.4	9.3	9.2	9.3	9.4	9.2	9.0	10.2
Spain *	16.2	16.3	15.5	15.3	14.7	12.5	10.0	9.7	11.8	12.1	11.5
Sweden *	40.8	47.1	49.7	50.3	47.2	45.1	45.1	45.5	42.4	40.1	34.8
Switzerland *	42.8	49.8	53.5	41.8	41.4	45.0	41.7	40.2	32.8	32.8	34.1
Taiwan, Republic of China *	n/a	n/a	n/a	n/a	n/a	n/a	17.1	12.6	19.6	13.7	14.5
Turkey, Republic of	1.7	5.3	3.4	3.9	5.3	3.6	4.1	3.7	3.4	3.1	8.8
United Kingdom	23.0	26.4	25.3	25.1	24.1	22.8	21.8	23.7	20.9	18.6	17.1
United States *	58.9	59.2	56.9	60.6	61.6	58.1	58.7	59.4	57.8	51.0	55.2
Venezuela *	n/a	n/a	n/a	n/a	n/a	14.5	10.6	12.8	12.2	14.0	9.5

** Adjusted for inventory change*
r - revised
n/a - Not available at publication
(a) See individual countries for kilogram measures

Per Capita Aluminum Consumption

ARGENTINA

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	166.3	165.6 r	162.0	157.4 r	155.1 r	150.5 r	139.9 r	133.7	136.4	140.5	134.1
4.	+ Imports of Mill Products	2.9	1.0	1.3	2.3	3.5	1.4	1.0	0.9	1.1	10.5	5.1
5.	+ Recovery of Secondary	9.4	6.0	5.3	7.1	8.0	3.6 r	3.6 r	7.5	7.0	6.0	5.0
6.	- Exports of Ingot	111.0	129.4 r	80.6 r	10.9	13.8	34.8	70.8 r	30.1	43.8	67.6	88.2
7.	- Exports of Mill Products	46.7	29.7	48.5	78.3	73.3	60.6	45.1	29.7	16.5	16.4	11.3
8.	= Apparent Aluminum Consumption	20.9	13.5	39.5	77.6	79.5	60.2	28.6	82.3	84.2	73.0	44.7
11.	+ Inventory Change	0.5	-23.3	25.7	4.1	-0.6	-5.5	-7.1	6.5	8.6	7.0	-6.8
12.	= Aluminum Consumption	20.4	36.8	13.8	73.5	80.1	65.7	35.7	75.8	75.6	66.0	51.5
13.	Mid-Year Population (Millions)	32.6	32.6	32.2	31.7	31.2	31.0	30.6	30.1	29.6	29.2	28.7
14.	= Per Capita Consumption (kg) (1)	0.6	0.4	1.2	2.4	2.5	1.9	0.9	2.7	2.8	2.5	1.6
15.	= Per Capita Consumption (kg) (2)	0.6	1.1	0.4	2.3	2.6	2.1	1.2	2.5	2.6	2.3	1.8

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
r - revised

SOURCE: Ministerio de Defensa and Aluminio Argentino, SAIC

AUSTRALIA

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	1,229.0	1,232.7	1,242.0	1,141.3	1,024.2	875.0	851.2	756.7	474.1	380.2	378.7
3.	+ Imports of Ingot	1.0	1.0	3.0	2.3	—	0.1	0.6	0.5	4.5	13.2	8.4
4.	+ Imports of Mill Products	20.0	22.3	18.7	14.5	12.4	8.4	10.2	8.7	6.4	13.1	14.4
5.	+ Recovery of Secondary	29.6	32.9	48.4	46.5	39.0	30.0	45.6	43.3	37.7	40.7	44.4
6.	- Exports of Ingot	935.5	937.3	923.4	812.2	737.0	588.0	577.2	477.3	215.8	185.6	122.6
7.	- Exports of Mill Products	56.0	49.2	52.0	54.1	57.9	56.4	54.0	58.8	49.5	32.6	25.4
8.	= Apparent Aluminum Consumption	288.1	302.4	336.7	338.3	280.7	269.1	276.4	273.1	257.4	229.1	297.9
11.	+ Inventory Change	-18.7	-14.6	6.7	3.3	-24.3	-6.5	-8.5	14.6	21.7	-23.7	-19.0
12.	= Aluminum Consumption	306.8	317.0	330.0	335.0	305.0	275.6	284.9	258.5	235.8	252.7	316.9
13.	Mid-Year Population (Millions)	17.3	17.1	16.8	16.5	16.2	16.0	15.8	15.5	15.4	15.2	14.9
14.	= Per Capita Consumption (kg) (1)	16.6	17.7	20.0	20.5	17.3	16.8	17.5	17.6	16.7	15.1	20.0
15.	= Per Capita Consumption (kg) (2)	17.7	18.6	19.6	20.3	18.8	17.3	18.1	16.6	15.3	16.6	21.3

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Aluminum Development Council Australia

AUSTRIA

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	80.4	89.4	92.9	95.5	93.4	92.5	94.1	95.8	94.2	93.9	94.2
3.	+ Imports of Ingot	111.2	109.0	97.8	76.4	61.3	78.9	65.4	61.4	40.2	38.7	33.2
4.	+ Imports of Mill Products	68.6	63.6	70.1	52.0	63.6	54.8	54.9	52.3	48.5	42.4	37.6
5.	+ Recovery of Secondary	34.0	35.7	34.1	29.4	27.2	24.7	21.1	21.6	16.1	14.2	13.8
6.	- Exports of Ingot	27.7	20.7	20.0	21.0	33.7	28.3	26.7	25.5	25.6	25.6	25.0
7.	- Exports of Mill Products	110.1	115.8	110.5	99.9	116.9	105.3	110.1	100.0	101.4	78.6	69.1
8.	= Apparent Aluminum Consumption	156.4	161.2	164.4	132.4	94.9	117.3	98.7	105.6	72.0	85.0	84.6
11.	+ Inventory Change	—	-4.4	—	-5.4	-12.5	7.1	4.5	7.0	-14.7	3.8	-5.4
12.	= Aluminum Consumption	156.4	165.6	164.4	137.8	107.4	110.2	94.2	98.6	86.7	81.2	90.0
13.	Mid-Year Population (Millions)	7.8	7.7	7.6	7.6	7.6	7.6	7.5	7.5	7.5	7.5	7.5
14.	= Per Capita Consumption (kg) (1)	20.0	20.9	21.6	17.4	12.5	15.4	13.2	14.1	9.6	11.3	11.3
15.	= Per Capita Consumption (kg) (2)	20.0	21.5	21.6	18.1	14.1	14.5	12.6	13.1	11.6	10.8	12.0

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Fachverband der Metallindustrie Osterreichs

BAHRAIN

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	211.0	214.0	187.0	183.0	182.0	176.6	175.5	175.8	171.7	171.0	142.0
5.	+ Recovery of Secondary	2.0	3.0	2.0	2.0	—	1.5	—	—	—	1.5	
6.	- Exports of Ingot	104.0	122.0	116.0	114.0	129.0	199.9	133.0	168.3	190.5	157.0	83.0
7.	- Exports of Mill Products	—	50.0	38.0	42.0	33.0	—	15.2	13.2	18.0	12.0	15.0
8.	= Apparent Aluminum Consumption	109.0	45.0	35.0	29.0	20.0	(21.8)	27.3	(5.7)	(36.8)	3.5	44.0
9.	+ Beginning Inventory	11.0	17.0	11.0	13.0	16.1	64.7	41.9	51.6	91.7	90.0	48.0
10.	- Ending Inventory	10.0	11.0	17.0	11.0	13.0	16.1	64.7	41.9	51.6	91.7	0.0
11.	= Inventory Change	-1.0	-6.0	6.0	-2.0	-3.1	-48.6	22.8	-9.7	-40.1	1.7	42.0
12.	= Aluminum Consumption	110.0	51.0	29.0	31.0	23.1	26.8	4.5	4.0	3.3	1.8	2.0
13.	Mid-Year Population (Millions)	0.52	0.50	0.49	0.47	0.42	0.41	0.40	0.40	0.38	0.37	0.35
14.	= Per Capita Consumption (kg) [1]	211.0	89.5	71.6	61.3	48.1	(53.0)	68.3	(14.3)	(95.8)	9.4	125.4
15.	= Per Capita Consumption (kg) [2]	213.2	101.4	59.3	65.5	55.5	65.2	11.2	10.0	8.6	4.9	5.7

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Aluminum Barhrain B.S.C.

BELGIUM

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	370.6	367.5	358.1	355.1	315.5	307.4	307.9	311.0	289.0	267.4	245.0
4.	+ Imports of Mill Products	173.9	162.0	141.7	150.0	121.8	109.9	95.7	93.8	90.5	86.9	62.9
5.	+ Recovery of Secondary	—	3	3.2	3.2	3.2	2	2	2	1		
6.	- Exports of Ingot	53.7	32.9	35.4	32.9	27.6	24.9	23.0	10.3	17.0	13.8	29.7
7.	- Exports of Mill Products	366.1	376.4	390.8	369.1	333.5	289.4	286.5	280.6	269.1	248.5	206.3
8.	= Apparent Aluminum Consumption	124.7	123.2	76.8	106.3	79.4	105.0	96.1	115.9	94.4	92.0	71.9
13.	Mid-Year Population (Millions)	10.0	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.8
14.	= Per Capita Consumption (kg) [1]	12.5	12.4	7.7	10.8	8.0	10.6	9.7	11.8	9.5	9.3	7.3

NOTE: (1) Without Inventory Change

SOURCE: Federation des Enterprises de Metaux Non Ferreux

BRAZIL

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	1,139.6	930.6	887.9	873.5	843.5	757.3	549.4	455.0	400.7	299.0	256.4
3.	+ Imports of Ingot	2.2	2.6	2.5	0.1	2.3	1.4	2.6	4.6	3.0	10.8	28.3
4.	+ Imports of Mill Products	17.4	13.5	9.3	7.3	6.3	2.2	3.8	5.0	2.8	3.9	8.7
5.	+ Recovery of Secondary	66.4	65.0	66.6	66.8	65.9	60.6	52.7	47.2	45.0	37.8	37.3
6.	- Exports of Ingot	787.6	592.0	470.3	514.9	430.9	323.5	179.1	148.0	116.3	6.7	2.2
7.	- Exports of Mill Products	42.0	47.4 r	54.5	41.6	26.0	33.5	36.0	57.3	53.3	11.7	18.6
8.	= Apparent Aluminum Consumption	396.0	372.3	441.5	391.2	461.1	464.5	393.4	306.5	281.9	333.1	309.9
11.	+ Inventory Change	157.0	101.3	76.5 r	72.6	62.8	29.6	37.6	20.1	-7.9	21.2	20.8
12.	= Aluminum Consumption	239.0	271.0	365.0	318.6	398.3	434.9	355.8	286.4	289.8	311.9	289.1
13.	Mid-Year Population (Millions)	146.1	150.4 r	147.6	144.4	141.4	138.4	135.6	132.6	129.6	126.8	124.0
14.	= Per Capita Consumption (kg) [1]	2.7	2.5	3.0	2.7	3.3	3.4	2.9	2.3	2.2	2.6	2.5
15.	= Per Capita Consumption (kg) [2]	1.6	1.8	2.5	2.2	2.8	3.1	2.6	2.2	2.2	2.5	2.3

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
r - revised

SOURCE: Associacao Brasileira do Aluminio

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

CAMEROON

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	85.6	87.5	87.3	80.0	71.5	81.1	81.6	73.1	77.4	78.9	65.4
3.	+ Imports of Ingot	—	—	—	—	—	—	—	—	—	—	—
4.	+ Imports of Mill Products	—	—	—	—	—	—	0.1	—	—	0.9	0.9
6.	- Exports of Ingot	65.8	67.7	62.4	63.1	47.4	53.0	51.9	54.3	52.4	55.4	44.5
7.	- Exports of Mill Products	5.0	5.3	7.1	6.0	5.8	6.8	8.9	6.7	9.8	10.7	7.0
8.	= Apparent Aluminum Consumption	14.8	14.5	17.8	10.9	18.3	21.3	20.9	12.1	15.2	13.7	14.8
11.	+ Inventory Change	-0.3	0.8	-1.8	-0.5	0.3	0.2	-1.1	8.6	-0.5	1.6	
12.	= Aluminum Consumption	14.8	14.8	17.0	12.7	18.8	21.0	20.7	13.2	6.6	14.2	13.2
13.	Mid-Year Population (Millions)	11.8	11.8	10.9	10.9	10.9	10.2	9.6	9.2	8.9	8.7	8.5
14.	= Per Capita Consumption (kg) (1)	1.3	1.2	1.6	1.0	1.7	2.1	2.2	1.3	1.7	1.6	1.7
15.	= Per Capita Consumption (kg) (2)	1.3	1.3	1.6	1.2	1.7	2.1	2.2	1.4	0.7	1.6	1.6

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Aluminium Pechiney

CANADA

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	1,822.0	1,567.0	1,557.0	1,535.0	1,547.0	1,355.0	1,282.0	1,223.0	1,094.0	1,070.0	1,118.1
3.	+ Imports of Ingot	74.0	85.0	65.0	59.0	53.0	65.0	60.0	39.0	31.0	24.0	14.3
4.	+ Imports of Mill Products	293.0	327.0	342.0	311.0	214.0	179.0	174.0	188.0	122.0	110.0	125.1
5.	+ Recovery of Secondary	80.0	84.0	90.0	86.0	80.0	78.0	74.0	70.0	56.0	50.0	65.0
6.	- Exports of Ingot	1,473.0	1,282.0	1,159.0	1,155.0	1,172.0	1,164.0	1,051.0	834.0	925.0	896.0	725.5
7.	- Exports of Mill Products	210.0	194.0	157.0	143.0	155.0	82.0	78.0	100.0	65.0	42.0	40.5
8.	= Apparent Aluminum Consumption	586.0	587.0	738.0	693.0	567.0	431.0	461.0	586.0	313.0	316.0	556.5
11.	+ Inventory Change	15.0	-17.0	9.0	2.0	-1.0	-57.0	-54.0	92.0	-48.0	-99.0	160.0
12.	= Aluminum Consumption	571.0	604.0	729.0	691.0	568.0	488.0	515.0	494.0	361.0	415.0	396.5
13.	Mid-Year Population (Millions)	26.9	26.6	26.2	25.8	25.7	25.4	25.2	25.0	24.8	24.6	24.2
14.	= Per Capita Consumption (kg) (1)	21.8	22.1	28.2	26.9	22.1	17.0	18.3	23.4	12.6	12.8	23.0
15.	= Per Capita Consumption (kg) (2)	21.2	22.7	27.8	26.8	22.1	19.2	20.4	19.8	14.6	16.9	16.4

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Aluminium Company of Canada, Ltd.

DENMARK

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	30.2	36.3	n/a	39.2	35.0	39.6	37.6	34.1	28.0	25.1	21.2
4.	+ Imports of Mill Products	74.6	75.7	n/a	79.3	61.3	56.4	53.1	55.0	62.5	43.9	40.5
5.	+ Recovery of Secondary	12.0	12.0	n/a	—	—	—	—	—	28.0	32.3	30.3
6.	- Exports of Ingot	8.2	9.5	n/a	37.6	37.8	30.8	28.8	25.5	24.0	20.1	20.1
7.	- Exports of Mill Products	24.2	23.8	n/a	27.8	14.8	16.4	16.9	17.0	24.5	10.4	8.4
8.	= Apparent Aluminum Consumption	84.4	90.7	n/a	53.1	43.7	48.8	45.0	46.6	70.0	70.8	63.5
13.	Mid-Year Population (Millions)	5.15	5.11	n/a	5.11	5.11	5.11	5.11	5.11	5.11	5.12	5.12
14.	= Per Capita Consumption (kg) (1)	16.4	17.7	n/a	10.4	8.6	9.5	8.8	9.1	13.7	13.8	12.4

NOTE: (1) Without Inventory Change
n/a - not available

SOURCE: Danmarks Statistik

Detail may not add to totals due to rounding.

FINLAND

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	19.4	24.1 r	23.7	23.6	23.5	21.6	20.3	20.7	26.3	27.2	28.8
4.	+ Imports of Mill Products	26.4	34.6 r	39.0	36.4	28.8	25.0	23.1	24.5	24.0	22.4	21.9
5.	+ Recovery of Secondary	22.5	22.0	28.0	29.4	27.8	21.7	22.1	18.7	5.4	6.8	6.5
6.	- Exports of Ingot	20.4	23.3 r	24.0	25.3	24.3	17.0	16.2	13.6	10.7	6.3	4.6
7.	- Exports of Mill Products	9.1	11.7	12.6	12.3	9.3	7.5	17.5	21.5	19.7	18.1	22.0
8.	= Apparent Aluminum Consumption	38.8	49.7	54.1	51.8	46.5	43.8	31.8	28.8	25.3	32.0	30.6
13.	Mid-Year Population (Millions)	5.01	4.99	4.96	4.95	4.93	4.91	4.90	4.88	4.86	4.83	4.80
14.	= Per Capita Consumption (kg) (1)	7.7	10.0	10.9	10.5	9.4	8.9	6.5	5.9	5.2	6.6	6.4

NOTE: (1) Without Inventory Change
r - revised

SOURCE: Central Statistical Office of Finland

FRANCE

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	286.1	325.9	334.9	327.7	322.5	321.8	293.2	341.5	360.8	360.8	435.6
3.	+ Imports of Ingot	551.5	541.0	484.2	461.8	407.1	428.1	396.1	365.0	394.6	352.0	300.4
4.	+ Imports of Mill Products	391.8	394.6	351.6	334.3	286.6	269.6 r	226.0 r	219.4 r	223.9	207.7	193.6
5.	+ Recovery of Secondary	299.3	294.8 r	299.2 r	271.7	236.6	218.8 r	201.1	205.6	212.0	197.9	211.3
6.	- Exports of Ingot	127.5	135.8	120.5	113.0	119.2	143.3	115.4	146.6	160.7	182.7	190.5
7.	- Exports of Mill Products	437.1	411.1	375.0	358.9 r	334.4	286.4 r	288.2 r	295.7 r	309.4	265.1	250.7
8.	= Apparent Aluminum Consumption	964.1	1,009.4 r	974.4 r	923.6	799.2	808.6 r	712.8 r	689.2 r	721.2	670.6	699.7
11.	= Inventory Change	-14.8	10.9	-3.6	3.7	-13.0	15.5	0.9	6.2	5.1	-18.1	21.1
12.	= Aluminum Consumption	978.9	998.5 r	978.0	919.9	812.2	793.1 r	711.9 r	683.0 r	716.1	688.7	678.6
13.	Mid-Year Population (Millions)	56.6	56.7 r	56.2	55.9	55.6	55.4	54.2 r	55.0 r	54.7	54.5	54.2
14.	= Per Capita Consumption (kg) (1)	17.0	17.8 r	17.4	16.5	14.4	14.6 r	13.2 r	12.5 r	0.0	12.3	12.9
15.	= Per Capita Consumption (kg) (2)	17.3	17.6 r	17.4	16.5	14.6	14.3 r	13.1 r	12.4 r	13.1	12.6	12.5

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
r - revised

SOURCE: Aluminium Pechiney

GERMANY, FEDERAL REPUBLIC OF

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	690.3	720.3 r	742.0	744.1	737.7	763.7	745.4	777.2	743.3	722.8	728.9
3.	+ Imports of Ingot	1,007.0	900.7	943.2	806.7	734.0	784.0	721.6	722.7	592.1	565.3	500.0
4.	+ Imports of Mill Products	550.0	527.1 r	487.2	424.6	379.9	327.7	322.7	304.7	299.0	262.3	240.1
5.	+ Recovery of Secondary	721.6	708.4 r	687.6	678.2	610.3	590.3	567.1	480.8	458.9	398.1	413.4
6.	- Exports of Ingot	290.4	319.4 r	326.0	323.8	333.6	301.7	281.7	294.3	321.1	255.4	253.0
7.	- Exports of Mill Products	670.0	674.9 r	684.7	676.1	589.2	563.4	560.7	558.3	512.9	449.7	406.9
8.	= Apparent Aluminum Consumption	2,008.5	1,862.2	1,849.3	1,653.7	1,539.1	1,600.6	1,514.4	1,432.8	1,259.3	1,243.3	1,222.6
9.	+ Beginning Inventory	230.1	251.7 r	212.5	230.5	294.9	254.9	253.5	302.7	221.3	269.3	240.1
10.	- Ending Inventory	252.1	230.1 r	251.7	212.5	230.5	294.9	254.9	253.5	302.7	221.3	269.3
11.	= Inventory Change	22.0	-21.6	39.2	-18.0	-64.4	40.0	1.4	-49.2	81.4	-48.0	29.2
12.	= Aluminum Consumption	1,986.5	1,883.8	1,810.1	1,671.7	1,603.5	1,560.6	1,513.0	1,482.0	1,177.9	1,291.3	1,193.4
13.	Mid-Year Population (Millions)	80.0	63.6 r	62.0	61.4	61.1	61.1	61.0	61.2	61.4	61.3	61.7
14.	= Per Capita Consumption (kg) (1)	25.1	29.3	29.8	26.9	25.2	26.2	24.8	23.4	20.5	20.3	19.8
15.	= Per Capita Consumption (kg) (2)	24.8	29.6	29.2	27.2	26.2	25.5	24.8	24.2	19.2	21.1	19.3

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
r - revised

SOURCE: Gesamtverband der Duetschen Aluminiumindustrie

Per Capita Aluminum Consumption—Continued

GREECE

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	n/a	n/a	n/a	130.0	126.3	123.4	136.0	136.2	134.9	146.1
3.	+ Imports of Ingot	n/a	n/a	n/a	n/a	13.5	7.2	3.6	6.5	2.1	4.0	2.8
4.	+ Imports of Mill Products	n/a	n/a	n/a	n/a	10.7	7.8	4.7	5.5	5.3	4.1	4.4
6.	- Exports of Ingot	n/a	n/a	n/a	n/a	71.8	45.8	43.2	48.4	55.1	66.6	69.2
7.	- Exports of Mill Products	n/a	n/a	n/a	n/a	76.8	39.4	49.8	48.5	40.6	29.5	26.9
8.	= Apparent Aluminum Consumption	n/a	n/a	n/a	n/a	5.6	56.1	38.7	51.1	47.8	46.9	57.2
13.	Mid-Year Population (Millions)	n/a	n/a	n/a	n/a	10.0	9.9	9.9	9.9	9.9	9.8	9.7
14.	= Per Capita Consumption (kg) [1]	n/a	n/a	n/a	n/a	0.6	5.7	3.9	5.2	4.9	4.8	5.9

NOTE: (1) Without Inventory Change
n/a - not available

SOURCE: National Statistical Service of Greece

HUNGARY

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	75.1	75.2	74.7	73.5	73.9	73.8	74.2	74.0	74.2	74.2
3.	+ Imports of Ingot	n/a	210.3	205.5	211.4	199.7	205.6	165.3	163.3	163.0	137.1	154.5
4.	+ Imports of Mill Products	n/a	2.6	3.6	3.9	3.8	5.5	na	na	na	na	na
5.	+ Recovery of Secondary	n/a	34.1	31.0	27.0	26.8	27.3	23.3	31.9	28.5	25.7	25.2
6.	- Exports of Ingot	n/a	122.0	76.5	59.1	63.4	61.2	50.5	71.3	57.8	48.4	85.7
7.	- Exports of Mill Products	n/a	56.3	67.6	66.6	57.2	59.3	55.6	52.0	49.6	42.2	31.4
8.	= Apparent Aluminum Consumption	n/a	143.8	171.2	191.3	183.2	191.8	156.3	146.1	158.1	146.4	136.8
9.	+ Beginning Inventory	n/a	41.0	40.0	33.4	38.6	26.3	na	na	na	na	na
10.	- Ending Inventory	n/a	24.1	41.0	44.0	33.4	38.6	na	na	na	na	na
11.	= Inventory Change	n/a	-16.9	1.0	10.6	-5.2	12.3	na	na	na	na	na
12.	= Aluminum Consumption	n/a	160.7	170.2	180.7	188.4	179.5	156.3	146.1	158.1	146.4	136.8
13.	Mid-Year Population (Millions)	n/a	10.6	10.6	10.6	10.6	10.6	10.6	10.7	10.7	10.7	10.7
14.	= Per Capita Consumption (kg) [1]	n/a	13.6	16.2	18.0	17.3	18.1	14.7	13.7	14.8	13.7	12.8
15.	= Per Capita Consumption (kg) [2]	n/a	15.2	16.1	17.0	17.7	16.9	14.7	13.7	14.8	13.7	12.8

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
n/a - not available

SOURCE: Hungarian Aluminum Corporation

ICELAND

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	89.2	86.8	88.5	82.0	83.5	78.2	75.4	80.4	76.1	75.2	73.7
4.	+ Imports of Mill Products	2.0	2.3	2.6	2.9	2.6	2.0	1.9	2.1	3.0	2.5	2.9
6.	- Exports of Ingot	86.8	86.3	90.1	81.4	89.2	76.3	72.1	79.9	106.9	61.5	64.1
8.	= Apparent Aluminum Consumption	4.4	2.8	1.0	3.5	-3.1	3.9	5.2	2.6	-27.8	16.2	12.5
9.	+ Beginning Inventory	3.1	2.0	3.6	3.0	8.7	6.8	3.5	3.0	33.8	20.1	10.5
10.	- Ending Inventory	5.2	3.1 r	2.0	3.6	3.0	8.7	6.8	3.5	3.0	33.8	20.1
11.	= Inventory Change	2.1	1.1	-1.6	0.6	-5.7	1.9	3.3	0.5	-30.8	13.7	9.6
12.	= Aluminum Consumption	2.2	2.5	2.6	2.9	2.6	2.0	1.9	2.1	3.0	2.5	2.9
13.	Mid-Year Population (Millions)	0.26	0.26	0.25	0.25	0.25	0.24	0.24	0.24	0.24	0.24	0.23
14.	= Per Capita Consumption (kg) [1]	17.0	10.9	4.0	13.9	-12.6	16.0	21.5	10.8	-116.8	68.9	54.6
15.	= Per Capita Consumption (kg) [2]	8.7	6.7	10.3	11.5	10.5	8.2	7.9	8.8	12.6	10.6	12.7

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Icelandic Aluminium Co. Ltd

Detail may not add to totals due to rounding.

INDIA

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	512.0	448.0	427.2	357.4	265.3	257.1	266.2	268.5	203.8	215.1	212.8
4.	+ Imports	10.0	30.0	30.0	7.3	78.1	64.2	31.1	66.0	15.6	8.6	30.9
7.	- Exports	72.0	35.0	27.4	14.9	—	—	—	—	—	—	—
8.	= Apparent Aluminum Consumption	450.0	443.0	429.8	349.8	343.5	321.3	297.3	334.5	219.4	223.7	243.7
13.	Mid-Year Population (Millions)	842.3	827.1	811.8	796.6	781.4	766.1	750.9	735.6	720.4	705.2	690.1
14.	= Per Capita Consumption (kg) (1)	0.53	0.54	0.53	0.44	0.44	0.42	0.40	0.45	0.30	0.32	0.35

NOTE: (1) Without Inventory Change

SOURCE: Aluminium Association of India

IRISH REPUBLIC

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	*	*	*	*	—	—	—	—	—	—
3.	+ Imports of Ingot	n/a	7.7	3.7	2.8	2.3	3.8	2.6	3.1	2	2.8	
4.	+ Imports of Mill Products	n/a	60.4	49.6	49.8	50.2	49.0	42.3	42.4	36.2	30.8	28.6
6.	- Exports of Ingot	n/a	2	2.6	1.9	1.5	1.5	0.6	1.1	2.5	1.9	
7.	- Exports of Mill Products	n/a	38.9	31.4	34.2	31.5	31.3	26.2	24.2	23.0	16.9	14.5
8.	= Apparent Aluminum Consumption	n/a	21.5	18.2	15.6	18.7	17.7	16.1	18.2	13.2	13.9	14.1
13.	Mid-Year Population (Millions)	n/a	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4
14.	= Per Capita Consumption (kg) (1)	n/a	6.1	5.2	4.4	5.3	5.0	4.5	5.2	3.8	4.0	4.1

NOTE: (1) Without Inventory Change
** - Less than 50 metric tons*
n/a - not available

SOURCE: Central Statistics Office, Dublin

ITALY

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	224.6	231.9	219.3 r	226.3	232.6	242.6	224.1	230.2	195.7	232.9	273.8
3.	+ Imports of Ingot	512.2	538.6	461.0	417.9	376.9	347.7	319.9	291.8	254.5	211.2	208.8
4.	+ Imports of Mill Products	256.0	218.4	186.4	177.8	155.6	125.2	109.7	106.1	110.3	83.3	81.6
5.	+ Recovery of Secondary	349.6	349.6	390.0	377.8	335.0	301.0	282.0	283.0	278.0	237.0	287.0
6.	- Exports of Ingot	17.5	28.3	29.8	38.4	51.6	34.3	43.8	32.2	41.3	54.1	49.8
7.	- Exports of Mill Products	180.0	173.4	139.5	118.2	108.2	105.9	103.0	94.0	112.2	100.9	93.8
8.	= Apparent Aluminum Consumption	1,144.9	1,136.8	1,087.4	1,043.2	940.3	876.3	788.9	784.9	685.0	609.4	707.6
11.	= Inventory Change	—	—	6.7	8.6	-3.1	40.0	9.2	19.8	-13.1	-38.0	4.8
12.	= Aluminum Consumption	1,144.9	1,136.8	1,080.7	1,034.6	943.4	836.3	779.7	765.1	698.1	647.4	702.8
13.	Mid-Year Population (Millions)	57.8	57.7	57.7	57.5	57.3	57.2	57.1	57.0	56.8	56.3	56.1
14.	= Per Capita Consumption (kg) (1)	19.8	19.7	18.9	18.1	16.4	15.3	13.8	13.8	12.1	10.8	12.6
15.	= Per Capita Consumption (kg) (2)	19.8	19.7	18.7	18.0	16.5	14.6	13.7	13.4	12.3	11.5	12.5

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Associazione Nazionale Industrie Metalli Non Ferrosi

Per Capita Aluminum Consumption—Continued

JAPAN

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production*	52.1	50.5	50.7	49.0	52.8	148.5 r	231.3	291.1	258.6	355.1	776.8
2.	+- Gov't Stockpile Adj.	—	—	—	—	—	6.2	108.8	22.0	-63.5	-60.2	-22.0
3.	+ Imports of Ingot	2,830.4	2,653.1	2,363.2	2,292.0	1,835.3	1,366.0	1,575.5	1,347.8	1,603.7	1,446.6	1,129.3
4.	+ Imports of Mill Products	83.3	65.3	75.7	84.8 r	52.5	33.1	32.6	39.0	33.6	27.6	30.0
5.	+ Recovery of Secondary	1,245.0	1,242.4	1,230.9	1,220.4	962.9	838.7	803.4	692.8	700.0	560.5	550.1
6.	- Exports of Ingot	4.6	4.8	2.9	3.4	1.9	2.0	2.2	2.3	1.7	6.7	12.2
7.	- Exports of Mill Products	158.4	193.4	136.6	134.5	212.7	224.6	243.9	227.4	197.0	154.9	113.9
8.	= Apparent Aluminum Consumption	4,047.8	3,813.1	3,581.0	3,508.3	2,688.9	2,165.9	2,505.5	2,163.0	2,333.7	2,168.0	2,338.1
9.	+ Beginning Inventory	515.0	521.2	580.1	515.3	479.2	775.3	872.8	964.2	1,037.6	1,077.0	760.7
10.	- Ending Inventory	640.5	515.0	521.2	580.1	515.3	479.2	775.3	872.8	964.2	1,037.6	1,077.0
11.	= Inventory Change	125.5	-6.2	-58.9	64.8	36.1	-296.1	-97.5	-91.4	-73.4	-39.4	316.3
12.	= Aluminum Consumption	3,922.3	3,819.3	3,639.9	3,443.5	2,652.8	2,462.0	2,603.0	2,254.4	2,407.1	2,207.4	2,021.8
13.	Mid-Year Population (Millions)	124.0	123.6	123.3	122.8	122.3	121.7	121.0	120.3	119.5	118.8	117.9
14.	= Per Capita Consumption (kg) (1)	32.6	30.8	29.1	28.6	22.0	17.8	20.7	18.0	19.5	18.2	19.8
15.	= Per Capita Consumption (kg) (2)	31.6	30.9	29.5	28.0	21.7	20.2	21.5	18.7	20.1	18.6	17.1

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
* Includes super-pure aluminum

SOURCE: Japan Aluminum Federation

KOREA, REPUBLIC OF

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	n/a	n/a	n/a	n/a	n/a	17.1	17.1	12.6	14.8	17.2
3.	+ Imports of Ingot	n/a	n/a	n/a	n/a	n/a	n/a	160.4	143.2	134.3	105.0	98.6
4.	+ Imports of Mill Products	n/a	n/a	n/a	n/a	n/a	n/a	30.9	34.6	31.7	24.0	17.0
5.	+ Recovery of Secondary	n/a	n/a	n/a	n/a	n/a	n/a	10.3	9.8	10.7	13.3	11.5
6.	- Exports of Ingot	n/a	n/a	n/a	n/a	n/a	n/a	0.7	0.2	0.2	—	—
7.	- Exports of Mill Products	n/a	n/a	n/a	n/a	n/a	n/a	33.5	21.3	20.9	24.0	25.7
8.	= Apparent Aluminum Consumption	n/a	n/a	n/a	n/a	n/a	n/a	184.5	183.2	168.2	133.1	118.6
13.	Mid-Year Population (Millions)	n/a	n/a	n/a	n/a	n/a	n/a	41.1	40.6	40.0	39.3	38.7
14.	= Per Capita Consumption (kg) (1)	n/a	n/a	n/a	n/a	n/a	n/a	4.5	4.5	4.2	3.4	3.1

NOTE: (1) Without Inventory Change
n/a - Not available

SOURCE: Ministry of Commerce and Industry

MEXICO

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	50.8	67.5	71.7	68.3	60.2	37.0	42.7	44.0	39.7	41.2	43.2
3.	+ Imports of Ingot	50.9	29.2	16.6	21.7	19.9	35.2	78.7	45.2	17.5	32.3	58.8
4.	+ Imports of Mill Products	91.0	76.8	47.5	29.8	35.2	20.6	25.7	15.3	6.2	62.2	82.9
5.	+ Recovery of Secondary	63.8	56.8	13.2	4.5	8.8	16.4	27.6 r	19.6	15.1	25.8	20.3
6.	- Exports of Ingot	7.2	16.1	8.6	16.1	9.8	8.0	5.0	1.9	0.9	0.2	*
7.	- Exports of Mill Products	5.7	8.1	12.0	13.9	11.5	4.1	12.1	6.2	1.3	1.1	3.1
8.	= Apparent Aluminum Consumption	243.6	206.1	128.3	94.2	102.8	97.2	157.6 r	116.0	76.4	160.2	202.1
9.	+ Beginning Inventory	3.4	5.8	3.0	4.6	6.7	8.2	6.0	7.5	13.4	4.5	2.0
10.	- Ending Inventory	3.9	3.4	5.8	3.0	4.6	6.7	8.2	6.0	7.5	13.4	4.5
11.	= Inventory Change	0.5	-2.3	2.8	-1.6	-2.1	-1.5	2.2	-1.5	-5.9	8.9	2.5
12.	= Aluminum Consumption	243.1	208.5	125.4	95.9	104.9	98.7	155.4 r	117.5	82.3	151.3	199.6
13.	Mid-Year Population (Millions)	82.0	81.0	84.0	83.0	81.0	78.0	75.0	73.0	72.0	70.0	68.0
14.	= Per Capita Consumption (kg) (1)	3.0	2.5	1.5	1.1	1.3	1.2	2.1	1.6	1.1	2.3	3.0
15.	= Per Capita Consumption (kg) (2)	3.0	2.6	1.5	1.2	1.3	1.3	2.1	1.6	1.1	2.2	2.9

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Instituto Mexicano del Aluminio, A.C.

NETHERLANDS

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	253.6	257.9	279.2	270.7	268.7	265.8	250.6	249.2	235.4	250.9	262.1
3.	+ Imports of Ingot	183.1	189.2	177.3	167.7	145.5	151.1	133.4	133.0	129.0	195.5	161.3
4.	+ Imports of Mill Products	185.8	191.6	169.6	171.8	149.7	134.5	126.0	120.5	272.6	107.9	92.4
5.	+ Recovery of Secondary	114.3	134.2	129.7	115.9	101.4	96.8	83.3	59.9	58.2	49.8	50.2
6.	- Exports of Ingot	332.4	362.4	345.4	329.8	314.4	301.3	296.8	279.0	277.3	350.8	352.0
7.	- Exports of Mill Products	177.6	170.0	151.9	139.2	134.1	131.1	99.5	107.3	262.8	89.7	86.5
8.	= Apparent Aluminum Consumption	226.8	240.5	258.5	257.1	216.8	215.8	197.0	176.3	155.1	163.6	127.6
9.	+ Beginning Inventory	11.0	9.5	10.3	10.7	8.2	9.9	6.8	11.5	9.6	8.7	10.3
10.	- Ending Inventory	12.3	11.0	9.5	10.3	10.7	8.2	9.9	6.8	11.5	9.6	8.7
11.	= Inventory Change	1.3	1.5	-0.8	-0.4	2.5	-1.7	3.1	-4.7	1.9	0.9	-1.6
12.	= Aluminum Consumption	225.5	239.0	259.3	257.5	214.3	217.5	193.9	181.0	153.2	162.7	129.2
13.	Mid-Year Population (Millions)	15.0	14.9	14.8	14.7	14.6	14.5	14.5	14.4	14.4	14.3	14.2
14.	= Per Capita Consumption (kg) (1)	15.1	16.1	17.5	17.5	14.8	14.9	13.6	12.2	10.8	11.4	9.0
15.	= Per Capita Consumption (kg) (2)	15.0	16.0	17.5	17.5	14.7	15.0	13.4	12.6	10.6	11.4	9.1

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Vereniging Nederlands Aluminium Instituut

NEW ZEALAND

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	258.5	259.7	257.5	255.6	249.0	236.2	241.6	241.6	220.1	163.1	154.3
3.	+ Imports of Ingot	1.9	7.8	4.5	9.2	5.4	0.1	0.5	1.4	6.6	7.2	3.4
4.	+ Imports of Mill Products	13.3	11.7	10.8	7.2	6.0	5.0	3.7	3.6	2.9	3.1	2.6
5.	+ Recovery of Secondary	4.7	4.8	4.5	3.1	4.0	4.0	4.0	3.7	3.0	2.7	3.0
6.	- Exports of Ingot	239.4	235.5	232.1	232.2	219.0	209.1	224.6	212.8	210.4	140.2	124.8
7.	- Exports of Mill Products	9.3	9.2	9.1	7.8	4.6	5.4	9.5	6.2	5.4	7.7	5.7
8.	= Apparent Aluminum Consumption	29.7	39.3	36.1	35.1	40.8	30.8	15.7	31.3	16.8	28.2	32.8
9.	+ Beginning Inventory	19.5	14.5	15.4	14.3	12.6	15.2	32.5	31.8	41.6	35.6	31.9
10.	- Ending Inventory	22.2	19.5	14.5	15.4	14.3	12.6	15.2	32.5	31.8	41.6	35.6
11.	= Inventory Change	2.7	5.0	-0.9	1.1	1.7	-2.6	-17.3	0.7	-9.8	6.0	3.7
12.	= Aluminum Consumption	27.0	34.3	37.0	34.0	39.1	33.4	33.0	30.6	26.6	22.2	29.1
13.	Mid-Year Population (Millions)	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1
14.	= Per Capita Consumption (kg) (1)	8.7	11.7	10.9	10.7	12.4	9.4	4.8	9.7	5.3	8.9	10.5
15.	= Per Capita Consumption (kg) (2)	8.0	10.2	11.2	10.3	11.9	10.2	10.1	9.5	8.3	7.0	9.3

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Comalco Limited

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

NORWAY

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	885.9	871.1	859.0	826.6	797.8	729.1	724.1	760.8	715.4	645.1	636.1
3.	+ Imports of Ingot	81.0	80.0 r	102.1	90.7	57.1	35.1	34.7	31.6	11.2	21.0	14.8
4.	+ Imports of Mill Products	30.3	31.3 r	29.5	30.6	33.1	51.9	46.0	51.8	42.4	37.2	38.5
5.	+ Recovery of Secondary	31.2	19.5 r	7.2	7.2	—	—	—	2.3	0.7	2.8	2.8
6.	- Exports of Ingot	810.2	777.3	770.4	755.0	754.2	646.5	643.8	638.7	637.4	545.4	524.0
7.	- Exports of Mill Products	140.9	152.2 r	118.3	113.1	102.7	89.3	91.7	91.8	105.1	76.8	74.9
8.	= Apparent Aluminum Consumption	77.4	72.4 r	109.0	87.0	31.1	80.3	69.3	116.0	27.2	83.9	93.3
11.	+ Inventory Change	-2.3	-8.2	—	—	-28.5	4.7	-14.3	26.8	-27.4	-28.4	15.8
12.	= Aluminum Consumption	79.7	80.6	109.0	87.0	59.6	75.6	83.6	89.2	54.6	112.3	77.5
13.	Mid-Year Population (Millions)	4.3	4.3 r	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
14.	= Per Capita Consumption (kg) (1)	18.2	17.0	26.6	21.2	7.6	19.6	16.9	28.3	6.6	20.5	22.8
15.	= Per Capita Consumption (kg) (2)	18.7	19.0	26.6	21.2	14.5	18.4	20.4	21.8	13.3	27.4	18.9

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
r - revised

SOURCE: Skan Aluminium

PANAMA

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	n/a	0.8	0.5	0.6	1.8	1.6	1.4	1.2	1.2	1.2	1.6
4.	+ Imports of Mill Products	n/a	3.2	3.0	2.4	2.2	0.4	0.4	3.6	1.6	0.1	0.2
5.	+ Recovery of Secondary	n/a	2.8	2.4	1.2	1.3	0.7	0.7	0.6	0.6	0.6	0.5
6.	- Exports of Ingot	n/a	0.8	0.5	0.6	0.9	0.5	0.4	0.3	0.2	—	—
7.	- Exports of Mill Products	n/a	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.2	0.3	0.2
8.	= Apparent Aluminum Consumption	n/a	5.7	4.9	3.1	3.9	1.8	1.7	4.7	3.0	1.6	2.1
13.	Mid-Year Population (Millions)	n/a	2.40	2.35	2.30	2.30	2.27	2.20	2.14	2.10	2.00	1.98
14.	= Per Capita Consumption (kg) (1)	n/a	2.4	2.1	1.3	1.7	0.8	0.7	2.2	1.4	0.8	1.1

NOTE: (1) Without Inventory Change
n/a - Not available

SOURCE: Aluminio de Panama, S.A.

PHILIPPINES, REPUBLIC OF

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	n/a	9.2	14.4	12.4	7.1	5.3	2.5	2.7	8.5	9.5	10.4
4.	+ Imports of Mill Products	n/a	2.9	2.5	2.2	1.8	2.3	4.7	6.7	9.4	16.9	4.4
6.	- Exports of Ingot	n/a	*	*	*	*	*	*	—	—	—	*
7.	- Exports of Mill Products	n/a	—	—	—	—	—	—	0.3	2.9	4.3	4.7
8.	= Apparent Aluminum Consumption	n/a	12.1	16.9	14.6	8.9	7.6	7.2	9.1	15.0	22.1	10.1
13.	Mid-Year Population (Millions)	n/a	57.4	57.4	57.4	57.4	56.0	54.7	53.4	52.1	50.8	49.5
14.	= Per Capita Consumption (kg) (1)	n/a	0.2	* 0.3	0.3	0.2	0.1	0.1	0.2	0.3	0.4	0.2

NOTE: (1) Without Inventory Change
** - Less than 50 metric tons*
n/a - Not available

SOURCE: National Census and Statistics Office

Detail may not add to totals due to rounding

PORTUGAL

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	50.0	49.5	47.1	45.1	44.0	39.9	34.1	26.1	43.0	46.2	40.1
4.	+ Imports of Mill Products	20.0	22.3	20.7	17.0	17.2	14.3	12.9	13.2	15.3	17.9	18.2
5.	+ Recovery of Secondary	2.0	3.0 r	2.2 r	2.5 r	2.3 r	2.1	2.2	2.4	2.4	1.9	2.0
6.	- Exports of Ingot	—	2.2	1.2	1.5	2.1	—	2.0	0.8	0.3	0.3	0.3
7.	- Exports of Mill Products	8.0	8.2	7.9	8.0	5.2	5.0	3.8	9.3	14.9	16.1	10.6
8.	= Apparent Aluminum Consumption	64.0	64.4	60.9	55.1	56.2	51.3	43.4	31.6	45.5	49.6	49.4
13.	Mid-Year Population (Millions)	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.1	10.0	9.9	9.9
14.	= Per Capita Consumption (kg) (1)	6.3	6.3	6.0	5.4	5.5	5.0	4.3	3.1	4.6	5.0	5.0

NOTE: (1) Without Inventory Change
r - revised

SOURCE: National Statistical Institute

EL SALVADOR

		1990	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	n/a	2.2	1.4	1.8	1.3	1.7	0.5	1.2	1.1	0.9	1.3
4.	+ Imports of Mill Products	n/a	0.8	1.0	0.7	0.7	—	—	0.3	1.9	—	0.8
5.	+ Recovery of Secondary	n/a	—	0.1	0.1	0.6	0.1	0.5	0.5	0.5	0.6	0.6
7.	- Exports of Mill Products	n/a	1.5	0.8	1.0	1.0	0.9	0.8	1.1	1.0	0.4	1.3
8.	= Apparent Aluminum Consumption	n/a	1.6	1.7	1.5	1.6	0.9	0.2	0.9	2.5	1.2	1.5
13.	Mid-Year Population (Millions)	n/a	5.25	5.14	5.03	4.93	4.97	4.85	4.78	4.83	4.74	4.60
14.	= Per Capita Consumption (kg) (1)	n/a	0.3	0.3	0.3	0.3	0.2	0.0	0.2	0.5	0.3	0.3

NOTE: (1) Without Inventory Change
n/a - Not available

SOURCE: Aluminio de Centro America, S.A.

KINGDOM OF SAUDI ARABIA

		1990	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	n/a	n/a	—	—	—	—	—	—	*	*
3.	+ Imports of Ingot	n/a	n/a	n/a	47.0	36.6	9.1	9.5	8.7	14.6	5.2	80.3
4.	+ Imports of Mill Products	n/a	n/a	n/a	40.0	30.8	38.2	99.8	61.6	148.9	28.8	12.2
6.	- Exports of Ingot	n/a	n/a	n/a	—	—	—	—	—	—	—	3.8
7.	- Exports of Mill Products	n/a	n/a	n/a	—	—	—	—	—	—	0.5	*
8.	= Apparent Aluminum Consumption	n/a	n/a	n/a	103.0	87.4	47.3	109.2	70.3	163.5	33.4	88.6
13.	Mid-Year Population (Millions)	n/a	n/a	n/a	12.0	12.0	8.0	8.0	7.8	7.8	7.8	7.8
14.	= Per Capita Consumption (kg) (1)	n/a	n/a	n/a	8.5	7.3	5.9	13.7	9.0	21.0	4.3	11.4

NOTE: (1) Without Inventory Change
** - Less than 50 metric tons*
n/a - Not available

SOURCE: Saudi Basic Industries Corp

SINGAPORE, REPUBLIC OF

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
3.	+ Imports of Ingot	n/a	46.0	39.0	126.0	41.0	16.0	14.0	11.0	18.0	11.0	8.0
4.	+ Imports of Mill Products	n/a	51.0	44.0	46.0	40.0	29.0	32.0	33.0	35.0	28.0	27.0
6.	- Exports of Ingot	n/a	22.0	66.0	107.0	13.0	6.0	8.0	7.0	13.0	6.0	3.0
7.	- Exports of Mill Products	n/a	24.0	12.0	10.0	9.0	9.0	8.0	7.0	14.0	7.0	4.0
8.	= Apparent Aluminum Consumption	n/a	51.0	5.0	55.0	59.0	30.0	30.0	30.0	26.0	26.0	28.0
13.	Mid-Year Population (Millions)	n/a	2.69	2.69	2.65	2.61	2.59	2.56	2.53	2.50	2.50	2.40
14.	= Per Capita Consumption (kg) (1)	n/a	19.0	1.9	20.8	22.6	11.6	11.7	11.9	10.4	10.4	11.7

NOTE: (1) Without Inventory Change
n/a - Not available

SOURCE: Department of Statistics, Singapore

Per Capita Aluminum Consumption—Continued

SOUTH AFRICA, REPUBLIC OF

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	n/a	n/a	172.2	170.6	169.6	164.6	167.4	161.3	105.8	83.7
3.	+ Imports of Ingot	n/a	n/a	n/a	0.4	0.4	0.4	0.4	0.2	0.4	0.7	1.8
4.	+ Imports of Mill Products	n/a	n/a	n/a	17.0	17.0	17.0	16.5	11.8	14.8	10.8	12.0
5.	+ Recovery of Secondary	n/a	n/a	n/a	27.0	27.0	27.0	25.0	28.2	31.7	27.2	28.3
6.	- Exports of Ingot	n/a	n/a	n/a	68.3	93.8	92.4	90.5	82.7	110.5	24.6	2.9
7.	- Exports of Mill Products	n/a	n/a	n/a	3.0	3.0	3.0	2.5	2.2	0.7	0.9	1.1
8.	= Apparent Aluminum Consumption	n/a	n/a	n/a	145.3	118.2	118.6	113.5	122.7	97.0	119.0	121.8
11.	+ Inventory Change	n/a	n/a	n/a	—	—	2.2	-2.5	8.0	-11.6	12.3	3.7
12.	= Aluminum Consumption	n/a	n/a	n/a	145.3	118.2	116.4	116.0	114.7	108.6	106.7	118.1
13.	Mid-Year Population (Millions)	n/a	n/a	n/a	28.0	28.0	28.0	27.4	26.8	26.1	26.2	25.6
14.	= Per Capita Consumption (kg) (1)	n/a	n/a	n/a	5.2	4.2	4.2	4.1	4.6	3.7	4.5	4.8
15.	= Per Capita Consumption (kg) (2)	n/a	n/a	n/a	5.2	4.2	4.2	4.2	4.3	4.2	4.1	4.6

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
(3) 1980-1983 Population excludes independent homelands - Transkei, Bophutatswanda and Venda
1984-pres. Population excludes independent homelands - Transkei, Bophutatswanda, Venda and Ciskei
n/a - Not available

SOURCE: Aluminium Federation of South Africa

SPAIN

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	355.0	355.0	352.0	294.0	341.0	354.7	370.1	380.8	355.5	365.1	396.6
3.	+ Imports of Ingot	57.0	24.0	11.0	45.0	9.0	19.2	9.7	10.6	12.3	18.3	13.6
4.	+ Imports of Mill Products	66.0	69.0	56.0	59.0	47.2	40.0	20.6	26.0	41.6	31.0	21.3
6.	- Exports of Ingot	100.0	93.0	95.0	75.0	99.3	142.2	202.7	232.2	165.9	145.2	162.7
7.	- Exports of Mill Products	69.0	62.0	52.0	56.0	47.0	43.3	41.8	40.5	35.3	36.9	39.0
8.	= Apparent Aluminum Consumption	309.0	293.0	272.0	267.0	250.9	228.4	155.9	144.7	208.2	232.3	229.8
11.	+ Inventory Change	15.0	-2.0	-5.0	-4.0	-9.0	8.3	-18.0	-25.0	4.0	23.5	33.5
12.	= Aluminum Consumption	294.0	295.0	277.0	271.0	259.9	220.1	173.9	169.7	204.2	208.8	196.3
13.	Mid-Year Population (Millions)	39.9	39.9	39.5	39.0	38.9	38.7	38.5	38.4	38.2	37.9	37.7
14.	= Per Capita Consumption (kg) (1)	7.7	7.3	6.9	6.8	6.4	5.9	4.0	3.8	5.5	6.1	6.1
15.	= Per Capita Consumption (kg) (2)	7.4	7.4	7.0	6.9	6.7	5.7	4.5	4.4	5.3	5.5	5.2

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Aluminio de Galicia, S.A.

Detail may not add to totals due to rounding.

SWEDEN

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	96.9	96.3	97.0	99.2	81.5	77.1	83.7	82.9	82.2	78.9	82.8
3.	+ Imports of Ingot	49.0	46.7	56.1	58.8	43.1	54.3	46.3	48.5	49.7	45.5	38.7
4.	+ Imports of Mill Products	97.3	102.8 r	102.8 r	99.3	91.0	87.5	82.0	87.4	86.3	74.0	63.0
5.	+ Recovery of Secondary	39.5	50.4 r	53.3	50.7	48.8	41.9	39.4	37.0	29.0	27.2	26.7
6.	- Exports of Ingot	57.8	64.1	58.8	59.9	43.6	39.4	41.8	38.2	39.2	35.2	37.8
7.	- Exports of Mill Products	53.3	50.9 r	54.9	55.1	46.1	50.7	42.9	40.4	50.6	46.3	43.0
8.	= Apparent Aluminum Consumption	171.6	181.2	195.5 r	193.0	174.7	170.7	166.7	177.2	157.5	144.1	130.4
11.	+ Inventory Change	12.0	-1.8	3.8	0.3	-5.2	-1.1	-5.3	5.8	-2.0	-6.7	-0.7
12.	= Aluminum Consumption	159.6	183.0 r	191.7 r	192.7	179.9	171.8	172.0	171.4	159.5	150.8	131.1
13.	Mid-Year Population (Millions)	8.6	8.6	8.5	8.4	8.4	8.4	8.4	8.3	8.3	8.3	8.3
14.	= Per Capita Consumption (kg) (1)	19.9	21.2 r	23.0 r	22.9	20.8	20.3	19.8	21.3	19.0	17.4	15.7
15.	= Per Capita Consumption (kg) (2)	18.5	21.4 r	22.6 r	22.8	21.4	20.5	20.5	20.7	19.2	18.2	15.8

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: National Central Bureau of Statistics

SWITZERLAND

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	66.5	71.7	71.4	71.8	73.4	80.6	72.6	79.2	76.0	75.3	82.5
3.	+ Imports of Ingot	93.4	104.6	117.6	94.8	87.0	86.7	77.2	62.8	57.2	47.4	36.1
4.	+ Imports of Mill Products	81.1	92.2	80.8	74.1	64.5	65.2	62.2	56.1	52.7	47.1	47.9
5.	+ Recovery of Secondary	35.8	34.4	31.7	28.2	25.5	25.5	26.1	23.0	21.1	18.7	20.6
6.	- Exports of Ingot	32.9	30.6	32.5	32.2	26.6	23.4	19.9	25.7	26.7	25.4	22.7
7.	- Exports of Mill Products	114.8	116.3	106.0	116.0	99.6	99.3	95.1	84.3	80.4	70.5	66.0
8.	= Apparent Aluminum Consumption	129.1	156.0	163.0	120.7	124.2	135.3	123.1	111.1	99.9	92.6	98.3
11.	+ Inventory Change	-2.8	3.4	—	-4.4	0.2	2.7	0.1	-7.3	3.1	-4.2	-0.7
12.	= Aluminum Consumption	131.9	152.6	163.0	125.1	124.0	132.6	123.0	118.4	96.8	96.8	99.1
13.	Mid-Year Population (Millions)	6.8	6.8	6.7	6.6	6.6	6.5	6.5	6.5	6.5	6.5	6.4
14.	= Per Capita Consumption (kg) (1)	19.0	23.1	24.2	18.3	18.8	20.8	18.9	17.1	15.4	14.2	15.4
15.	= Per Capita Consumption (kg) (2)	19.4	22.6	24.2	19.0	18.8	20.4	18.9	18.2	14.9	14.9	15.5

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Vereinigung Schweizerischer Aluminium - Halbzeugwerke

TAIWAN, REPUBLIC OF CHINA

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	n/a	n/a	n/a	n/a	n/a	—	—	—	10.0	30.0
3.	+ Imports of Ingot	n/a	n/a	n/a	n/a	n/a	n/a	147.2	99.9	139.1	88.6	47.7
4.	+ Imports of Mill Products	n/a	n/a	n/a	n/a	n/a	n/a	32.4	22.8	23.2	15.0	9.7
5.	+ Recovery of Secondary	n/a	n/a	n/a	n/a	n/a	n/a	3.6	5.3	24.2	15.5	16.8
6.	- Exports of Ingot	n/a	n/a	n/a	n/a	n/a	n/a	5.8	3.1	2.6	0.6	—
7.	- Exports of Mill Products	n/a	n/a	n/a	n/a	n/a	n/a	29.6	17.3	18.4	14.0	19.2
8.	= Apparent Aluminum Consumption	n/a	n/a	n/a	n/a	n/a	n/a	147.8	107.6	165.5	114.5	85.0
11.	+ Inventory Change	n/a	n/a	n/a	n/a	n/a	n/a	—	—	—	0.9	-33.6
12.	= Aluminum Consumption	n/a	n/a	n/a	n/a	n/a	n/a	147.8	107.6	165.5	113.6	118.6
13.	Mid-Year Population (Millions)	n/a	n/a	n/a	n/a	n/a	n/a	19.0	18.8	18.6	18.3	18.0
14.	= Per Capita Consumption (kg) (1)	n/a	n/a	n/a	n/a	n/a	n/a	7.8	5.7	8.9	6.3	4.7
15.	= Per Capita Consumption (kg) (2)	n/a	n/a	n/a	n/a	n/a	n/a	7.8	5.7	8.9	6.2	6.6

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change
n/a - Not available

SOURCE: Taiwan Aluminium Corporation

Per Capita Aluminum Consumption—Continued

TURKEY, REPUBLIC OF

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	55.8	60.9 r	58.6 r	56.7 r	41.7 r	60.0	54.1	37.5	30.4	36.3	131.4
3.	+ Imports of Ingot	16.4	101.1 r	48.2 r	59.2 r	94.0 r	38.4	59.2	68.5	60.0	35.1	60.1
4.	+ Imports of Mill Products	5.0	4.0	5.0	6.0	8.0	3.0	3.0	3.1	5.7	8.6	10.8
6.	- Exports of Ingot	10.0	10.0	10.0	6.0	—	—	—	0.2	1.3	1.0	—
7.	- Exports of Mill Products	30.0	37.0	27.0	29.0	25.0	22.0	25.0	27.1	21.4	14.3	22.1
8.	= Apparent Aluminum Consumption	37.2	119.0	74.8	86.9	118.7	79.4	91.3	81.8	73.4	64.7	180.2
13.	Mid-Year Population (Millions)	49.2	49.2	49.2	49.2	49.3	49.3	49.3	48.3	47.3	46.3	45.3
14.	= Per Capita Consumption (kg) [1]	0.8	2.4	1.5	1.8	2.4	1.6	1.9	1.7	1.6	1.4	4.0

NOTE: (1) Without Inventory Change
r - revised

SOURCE: State Institute of Statistics

UNITED KINGDOM

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	293.5	289.8	297.3	300.2	294.4	275.9	275.4	287.9	252.5	240.8	339.2
3.	+ Imports of Ingot	193.8	252.9	256.0	243.4	175.1	180.6	145.8	170.2	162.4	154.8	123.3
4.	+ Imports of Mill Products	325.5	341.0	317.2	298.0	285.5	240.6	227.5	234.2	224.2	200.6	157.4
5.	+ Recovery of Secondary	129.4	114.3	103.9	99.6	110.8	110.1	121.9	137.1	122.6	108.4	140.7
6.	- Exports of Ingot	121.1	153.3	160.7	147.9	125.9	110.3	121.1	118.2	126.5	117.5	168.5
7.	- Exports of Mill Products	215.1	175.0	158.7	140.2	127.9	121.4	104.5	104.7	90.9	93.0	77.6
8.	= Apparent Aluminum Consumption	606.0	669.7	655.0	653.1	612.0	575.5	545.0	606.5	544.3	494.1	514.5
9.	+ Beginning Inventory	67.3	86.4	88.7	86.8	95.1	105.2	119.4	118.7	106.4	85.1	97.4
10.	- Ending Inventory	73.4	67.3	86.4	88.7	86.8	95.1	105.2	119.4	118.7	106.4	85.1
11.	= Inventory Change	6.1	-19.1	-2.3	1.9	-8.3	-10.1	-14.2	0.7	12.3	21.3	-12.3
12.	= Aluminum Consumption	599.9	688.8	657.3	651.2	620.3	585.6	559.2	605.8	532.0	472.8	526.8
13.	Mid-Year Population (Millions)	57.6	57.5	57.3	57.1	56.8	56.7	56.6	56.4	56.0	56.0	68.0
14.	= Per Capita Consumption (kg) [1]	10.5	11.6	11.4	11.4	10.8	10.1	9.6	10.8	9.7	8.8	7.6
15.	= Per Capita Consumption (kg) [2]	10.4	12.0	11.5	11.4	10.9	10.3	9.9	10.7	9.5	8.4	7.7

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: Aluminium Federation, Ltd. and British Alcan Ltd.

Detail may not add to totals due to rounding.

UNITED STATES OF AMERICA

Thousands of Metric Tons

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	4,121.2	4,048.3	4,030.2	3,944.5	3,346.9	3,038.7	3,499.7	4,099.1	3,353.3	3,273.7	4,488.7
3.	+ Imports of Ingot	1,028.6	962.1	925.6	1,027.3	1,245.5	1,348.8	868.7	882.0	742.7	616.3	644.7
4.	+ Imports of Mill Products	369.4	459.2	427.4	440.0	455.9	493.9	463.0	494.3	280.5	206.7	137.9
5.	+ Recovery of Secondary	2,501.0	2,393.0	2,054.0	2,122.0	1,986.0	1,773.0	1,762.0	1,760.0	1,773.0	1,665.6	1,789.9
6.	- Exports of Ingot	795.8	686.0	594.5	400.1	281.2	209.6	347.3	259.6	360.7	363.9	312.3
7.	- Exports of Mill Products	578.3	478.5	497.0	386.3	287.0	203.5	199.3	218.6	202.1	223.4	309.2
8.	= Apparent Aluminum Consumption	6,646.1	6,698.2	6,345.7	6,747.4	6,466.1	6,241.3	6,046.8	6,757.2	5,586.7	5,175.0	6,439.7
9.	+ Beginning Inventory	1,820.3	1,821.6	1,882.8	1,893.8	2,235.3	2,342.8	2,653.5	2,265.4	2,812.0	2,996.7	2,324.8
10.	- Ending Inventory	1,774.9	1,820.3	1,821.6	1,882.8	1,893.8	2,235.3	2,342.8	2,653.5	2,265.4	2,812.0	2,996.7
11.	= Inventory Change	-45.4	-1.3	-61.2	-11.0	-341.6	-107.5	-310.7	388.1	-546.6	-184.7	671.9
12.	= Aluminum Consumption	6,691.5	6,699.5	6,406.9	6,758.4	6,807.7	6,348.8	6,357.5	6,369.1	6,133.3	5,359.7	5,767.8
13.	Mid-Year Population (Millions)	250.6	249.4	248.2	245.8	243.7	241.0	238.7	236.5	234.0	231.5	229.3
14.	= Per Capita Consumption (kg) (1)	26.5	26.9	25.6	27.5	26.5	25.9	25.3	28.6	23.9	22.4	28.1
15.	= Per Capita Consumption (kg) (2)	26.7	26.9	25.8	27.5	27.9	26.3	26.6	26.9	26.2	23.2	25.2

NOTE: (1) Without Inventory Change
(2) Adjusted for Inventory Change

SOURCE: The Aluminum Association, Inc.

VENEZUELA

		1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
1.	+ Primary Aluminum Production	n/a	n/a	n/a	n/a	n/a	421.0	404.0	387.0	338.0	273.6	315.5
3.	+ Imports of Ingot	n/a	n/a	n/a	n/a	n/a	6.0	3.0	0.4	0.3	0.9	0.4
4.	+ Imports of Mill Products	n/a	n/a	n/a	n/a	n/a	17.0	19.0	21.0	13.0	25.7	23.8
5.	+ Recovery of Secondary	n/a	n/a	n/a	n/a	n/a	24.0	21.0	14.0	20.0	10.0	10.0
6.	- Exports of Ingot	n/a	n/a	n/a	n/a	n/a	247.0	297.0	179.0	292.0	208.5	239.0
7.	- Exports of Mill Products	n/a	n/a	n/a	n/a	n/a	103.0	106.0	68.0	22.0	0.2	24.4
8.	= Apparent Aluminum Consumption	n/a	n/a	n/a	n/a	n/a	118.0	44.0	175.4	57.3	101.5	86.3
9.	+ Beginning Inventory	n/a	n/a	n/a	n/a	n/a	60.0	99.0	22.0	55.9	48.8	25.4
10.	- Ending Inventory	n/a	n/a	n/a	n/a	n/a	61.0	60.0	99.0	22.0	55.9	48.8

n/a - Not available

ACSR AND ALUMINUM CABLE, BARE —Aluminum stranded conductor reinforced by a core of steel (ACSR), or aluminum (ACAR); or any other bare stranded aluminum conductor.

ATOMIZED POWDER —Powder produced by blowing or asperating molten metal through an orifice.

CASTING —A product made by pouring molton metal into a mold of a desired shape and letting it harden.

CONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED) —A solid round product that is long in relation to cross section, 0.375" or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into electrical conductor wire.

DIRECT MILL USES —Finished product applications supplied for the most part directly from mills rather than from distributors or jobber warehouses.

DRAWING STOCK (Redraw Rod) —See Conductor or Non Conductor Redraw Rod.

DRAWN TUBE —A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, and brought to final dimensions by drawing.

DROSS AND SKIMMINGS —The mixture of oxides and other impurities which float to the surface of molten aluminum and is skimmed off.

EXTRUDED PIPE AND TUBE —A hollow product formed by extruding that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape.

EXTRUDED ROD AND BAR —A solid product produced by extruding (sometimes brought to final dimensions by drawing) that is long in relation to cross section, which is round, square, rectangular, hexagonal, or octagonal in shape and 0.375" or greater in diameter or in at least one perpendicular distance between parallel faces.

EXTRUSION INGOT (BILLET) —A solid or hollow cast form, usually cylindrical, suitable for extruding.

FLAKED POWDER —Powder consisting of flat or scale-like particles of a thickness small compared with other dimensions, produced by milling in the presence of a lubricant.

EXTRUDED SHAPES —A product produced by extruding, that is long in relation to its cross-sectional dimensions and has a cross section other than that of rod and bar and pipe and tube.

FOIL —A flat rolled product, rectangular in cross section, of thickness less than 0.006".

FORGINGS (EXCLUDING IMPACT EXTRUSIONS) —A product worked to a predetermined shape by one or more processes such as hammering, upsetting, pressing, rolling, etc.

GENERAL LINE DISTRIBUTOR —Warehouses and sells a number of mill products to a wide variety of customers.

IMPACTS (EXCLUDING COLLAPSIBLE TUBES AND CANS) —A product formed in a confining die from metal slug, usually cold, by rapid single stroke application of force through a punch, causing the metal to flow around the punch and/or through an opening in the punch or die.

INTEGRATED PRODUCER (OR SUPPLIER) —For statistical reporting, a company which produces primary aluminum ingot in the United States and produces mill products from it.

METALLURGICAL/DESTRUCTIVE USES —Applications wherein, because of the way it is used, aluminum either loses its identity or is lost and cannot be recovered. Major uses include the deoxidizing or steel and reduction of ferroalloys; steel and other nonferrous metal alloys; steel coating; and such other applications as chemicals and catalysts.

MILL PRODUCTS —Metal that has been fashioned into an intermediate or semifabricated form in preparation for making a finished product. Example: sheet, a mill product, is used to make residential siding, a finished product.

NET SHIPMENTS —Excludes intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

NONCONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED) —A solid round product that is long in relation to cross section, 0.376" or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into nonconductor wire.

NONINTEGRATED FABRICATOR (OR SUPPLIER) —For statistical reporting, a U.S. mill product fabricator which is not affiliated with a domestic primary ingot producer.

OTHER INGOT AND MOLTEN METAL, PRIMARY —For statistical purposes, a cast form other than extrusion ingot (or molten metal), shipped by an integrated producer or nonintegrated fabricator from a company-owned facility not exclusively devoted to producing secondary ingot.

OTHER INGOT AND MOLTEN METAL, SECONDARY —For statistical purposes, a cast form other than extrusion ingot (or molten metal), principally produced from aluminum scrap to specification by secondary smelters (or others at a facility exclusively devoted to producing ingot from scrap for sale); excludes remelt scrap ingot (RSI) which is considered scrap until remelted and cast into specification ingot.

OTHER ROD AND BAR (CONTINUOUS-CAST OR ROLLED) —A solid, round, square, rectangular, hexagonal, or octagonal in shape produced by continuous casting or rolling, that is long in relation to cross section, 0.375" or greater in diameter or in at least one perpendicular distance between parallel faces; other than redraw rod and D.C. cast ingot.

PASTE —A blend of powder or flake with a thinner or plasticizer.

PLATE, NONHEAT-TREATABLE —A flat rolled product, rectangular in cross section, 0.250" or greater in thickness, which can be strengthened only by cold work.

PLATE, HEAT-TREATABLE _A flat rolled product, in 2000, 6000, or 7000 alloy series (except 7072), rectangular in cross section, 0.250" or greater in thickness, which can be strengthened by a suitable thermal treatment.

POWDER —An aggregate of discrete particles of aluminum, substantially all of which are finer than 1,000 microns (minus 18 mesh).

RECEIPTS —The metal physically received by a company for further processing.

REIMPORTS —Mill products that have been exported, partially processed outside the United States, and imported back to the United States while still in a mill product stage.

ROLLED STRUCTURAL SHAPES —A structural shape produced by hot rolling.

SCRAP —Includes "New" (prompt industrial) scrap, purchased, imported, or treated on toll, in all forms; and "Old" (post consumer or obsolete) scrap, including sweated pig; also remelt scrap ingot (RSI) which is considered scrap until remelted and cast into specification ingot.

SECONDARY SMELTER —A company whose facilities are exclusively devoted to producing ingot or molten aluminum from scrap.

SEMIFABRICATED PRODUCTS —See Mill Products.

SHEET, NONHEAT-TREATABLE —A rolled product, flat or coiled, rectangular in cross section, of 0.006" thickness but under 0.250" thickness, which can be strengthened only by cold work.

SHEET, HEAT-TREATABLE —A rolled product, in 2000, 6000, or 7000 alloy series (except 7072), flat or coiled, rectangular in cross section, of 0.006" thickness but under 0.250" thickness, which can be strengthened by a suitable thermal treatment.

STATISTICAL ADJUSTMENT —An adjustment made to product shipment data to account for net shipments of aluminum reported by the Bureau of the Census which are believed to be either over- or understated in the amounts indicated due to excessive or insufficient reporting. It also includes otherwise unpublished Census revisions. The addition of the statistical adjustment reconciles the amounts reported by the Bureau of the Census with the net shipments that the Aluminum Association feels are more correct.

WELDED TUBE —A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, produced by forming and seam-welding sheet longitudinally.

WIRE, BARE, CONDUCTOR AND NONCONDUCTOR —A solid wrought product that is long in relation to its cross section, which is square, round, rectangular, hexagonal, or octagonal in shape, whose diameter or greatest perpendicular distance between parallel faces (except for flattened wire) is less than 0.375".

WIRE AND CABLE, INSULATED OR COVERED —Aluminum electrical conductor wire or stranded conductors that are insulated or covered.

Publications

The following publications are available from The Aluminum Association, Inc.

- **Aluminum Situation** (monthly)
- **U.S. Exports and Imports of Aluminum** (monthly and quarterly)
- **Aluminum Extrusion Press Directory 1992**
- **Aluminum Statistical Review — Historical Supplement**
- **U.S. Aluminum Industry Plant Directory 1992**
- **Publications Guide of The Aluminum Association, Inc.**
- **Film Guide of the Aluminum Association**
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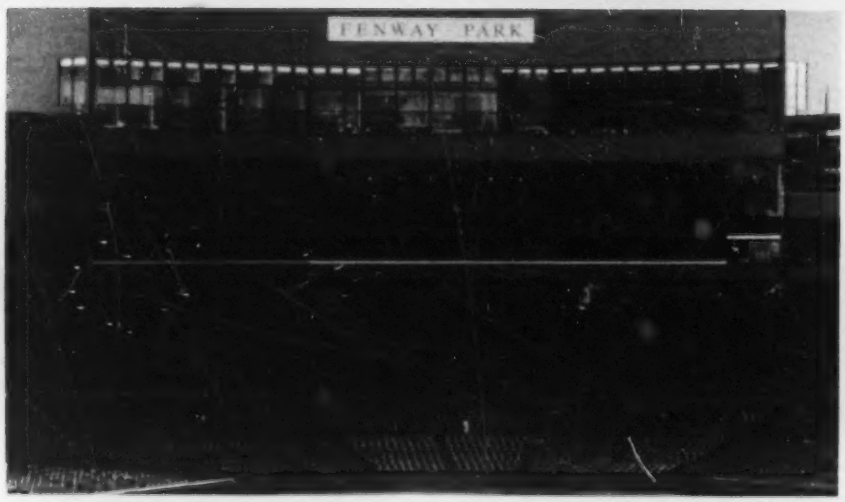

Aluminum can be fabricated into a variety of shapes and sizes offering versatility and light weight.

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